Date of issue	2024-07-04
Version	1.0
Total pages	22

Test report of
IES LM-79-08
Approved Method: Electrical and Photometric Measurements of Solid-State Lighting Products

Applicant:

RAB Lighting Inc

Address:

10 Broadway Road Cranbury, NJ 08512 USA

For Product:

LED Work Light

Model No.:

H20047(TEMP17-150):TEMP17-150

Test laboratory: Shenzhen Belling Efficiency Testing Lab Co., Ltd, 1Floor, No.1 Building, Meibaohe Industrial Park, Dalang Street, Longhua District, Shenzhen, Guangdong Prov.518101 China.

Sam Chen

Jason zhou

Complied by: Sam Chen — **Review by: Jason zhou**

Project Engineer — **Technical Manager**

Note: The test data was only valid for the test sample(s). This test report is prepared for the customer shown above and for the device described herein. It may not be duplicated or used in part without prior written consent from Shenzhen Belling Efficiency Testing Lab Co., Ltd. This report must not be used by the customer to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the U.S. Government.

1 General

1.1 Product Information

Manufacturer	RAB Lighting Inc
Manufacturer Address	10 Broadway Road Cranbury, NJ 08512 USA
Brand Name	RAB
Luminaire Type	LED Work Light
Model Number	H20047(TEMP17-150):TEMP17-150
Rated Inputs	AC 100-277V, 50/60Hz
Rated Power	150W
Nominal CCT	5000K
Date of Receipt Samples	2024-04-12
Date of test	2024-04-15 to 2024-04-17
Burning Time Before Test	0hour(For New Products)

1.2 Standards or methods

- ANSI C78.377-2017: Specifications for the Chromaticity of Solid State Lighting Products
- ANSI C82.77-10:2014: Harmonic Emission Limits - Related Power Quality Requirements for Lighting Equipment - Solid State
- CIE Publication No.13.3-1995: Method of Measuring and Specifying Color Rendering of Light Sources
- IESNA LM-79-08 Approved Method: Electric & Photometric Measurement of Solid-state Lighting Products

1.3 Description

- Declaration: RAB Lighting Inc declare that their product with model H20047(TEMP17-150):TEMP17-150 are the same to the product in the report BL240412004-9 and is authorized by original applicant to use their test data.
- Note: All the data in previous report BL240412004-9 is shared in report.

1.4 Equipment list

Device	Manufacture	Model No.	Serial No.	Calibration due date
Goniophotometeric System	SENSING	GMS-3000	M101758514120011	2025-04-09
AC Power Source	ALL POWER	ALL POWER	970780	2025-04-17
Total Luminous Flux Standard Lamp	SENSING	110V/100W	S13100188	2025-04-16
Total Luminous Flux Standard Lamp	OSRAM	12V/20W	LSD12201737	2025-04-16
Total Spectral Radiant Flux Standard Lamp	Everfine	D204	M133806CA1411205	2025-04-16
Digital Power Meter	YOKOGAWA	WT310	C2QM02030V	2025-04-17
Thermostatic stabilized photometric sphere	SENSING	SPR-600M	N.A	2025-04-09
Plant spectral photosynthetically radiometer	Everfine	SP-20	P612946CF1411115	2025-04-09
Digital Power Meter	YOKOGAWA	WT210	91L929742	2025-04-17
Spectral radiometer	SENSING	SPR-3000	S1101108	2025-04-09
Environment Measurer	XUYAO	HS-1	N/A	2025-04-11
Environment Measurer	XUYAO	HS-1	N/A	2025-04-11
Stop watch	KISLO	K610	N/A	2025-04-17
Digital Anemometer	TECMAN	TD8901	026141	2024-09-06

Statement of Traceability: Shenzhen Belling Efficiency Testing Lab Co., Ltd attests that all calibration has been performed using suitable standards traceable to national primary standards and International System of Unit (SI).

1.5 Report Revision

Original report BL240412006-9 dated at 2024-06-03 was recalled and declared as invalid by Shenzhen Belling Efficiency Testing Lab Co., Ltd. Report BL240412006-9A was issued on to replace report BL240412006-9.

Report Number	Report Date	Contents
BL240412006-9	2024-06-03	Original report
BL240412006-9A	2024-07-04	Updated the model number.

2 Test conducted and method

2.1 Ambient Condition

The ambient temperature in which measurements are being taken was maintained at 25°C ±1°C, the air flow around the sample(s) being tested did not affect the performance.

2.2 Power Supply Characteristics

The AC power supply had a sinusoidal voltage wave shape at the prescribed frequency (60 Hz) such that the RMS summation of the harmonic components does not exceed 3 percent of the fundamental during operation of the test item.

The voltage of AC power supply (RMS voltage) applied to the device under test was regulated to within±0.2 percent under load.

2.3 Seasoning and Stabilization

No seasoning was performed in accordance with IESNA LM-79-08. And before the measurement, the sample was stabilized until the light output and power variations were less than 0.5% in 30 minutes intervals (3 readings, 15 minutes apart).

2.4 Integrating Sphere System

The system includes AC power source, digital power meter, DC power supply, spectrophotometer, and integrating sphere. The integrating sphere system is calibrated by standard light source before measurement. The system and standard light source has been calibrated regularly and traceable to the National Primary Standards. 4π geometry was used during measurement. The product was operated in its intended orientation in application and was recorded in this report.

Integrating Sphere Uncertainty: The uncertainty of the light output (luminous flux) measurements is U=1.8% (K=2), at the 95% confidence level. The uncertainty of the correlated color temperature measurements is U=20K (K=2), at the 95% confidence level. The uncertainty of the CRI is U=1.8(K=2), at the 95% confidence level. The uncertainty of power meter AC current U=0.18% of rdg, AC Voltage U=0.16% of rdg, Power U=0.20% (K=2), at the 95% confidence level.

2.5 Goniophotometer System

The goniophotometer system is calibrated by standard light source before measurement. The standard light source has been calibrated regularly and traceable to the National Primary Standards.

Type C goniophotometer was used for measuring total luminous flux, luminous intensity distribution, and color spatial uniformity. The product was operated in its intended orientation in application and was recorded in this report. The method according to IESNA LM-79-08 following chapter.

Goniophotometer Uncertainty: The uncertainty of the luminous intensity is U=1.6% (K=2), at the 95% confidence level.

3 Test Result Summary

3.1 Integrating Sphere System (Total operating time for integrating sphere test: 1.0 hour)

3.1.1 Model Number: H20047(TEMP17-150):TEMP17-150, at 120V

Electrical data

Input Voltage(V)	Frequency (Hz)	Input Current (A)	Power (W)	Power Factor
120.09	60	1.251	149.33	0.994

Photometric data

Luminous Flux (lm)	Efficacy (lm/W)	CCT (K)
18248.74	122.2	4502

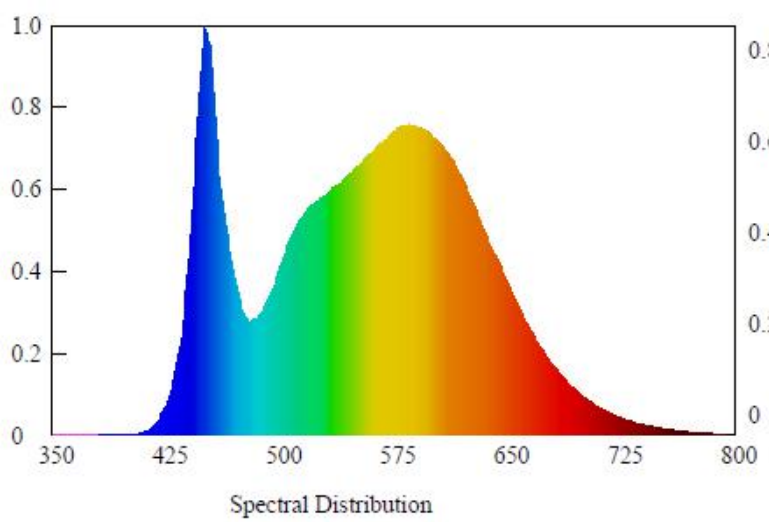
Chromaticity Coordinate

Duv	x	y	u'	v'
+0.00062	0.3610	0.3650	0.2169	0.4934

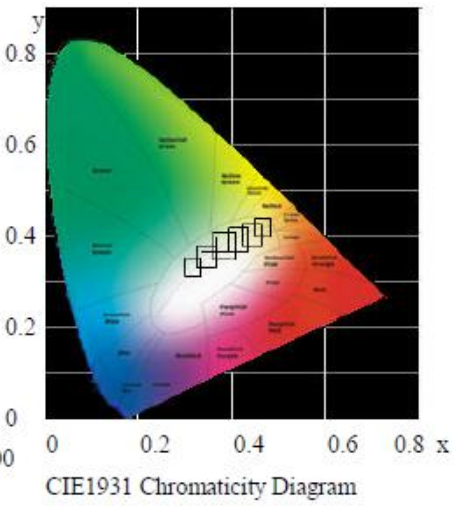
Color Rendering

CRI	R9	Rf	Rg	Rcs,h1(%)
83.6	12	84	96	-12

Spectral Distribution

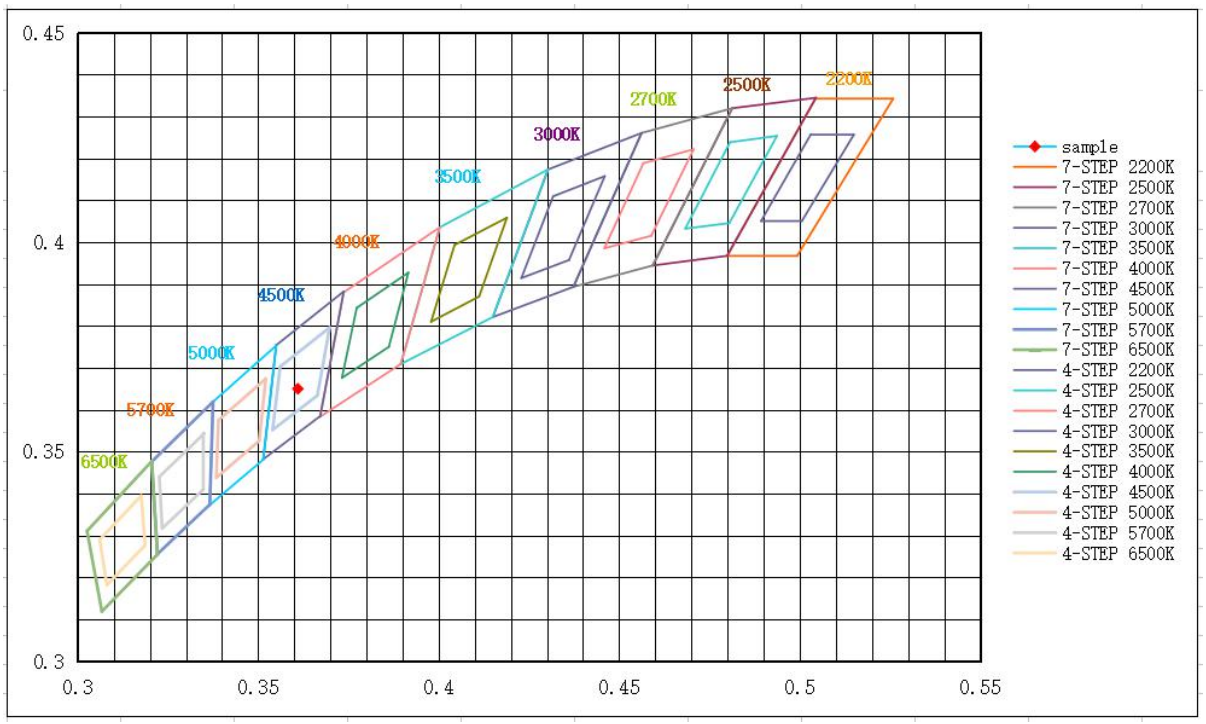


Spectral Distribution



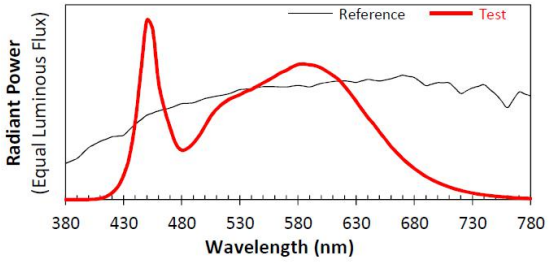
CIE1931 Chromaticity Diagram

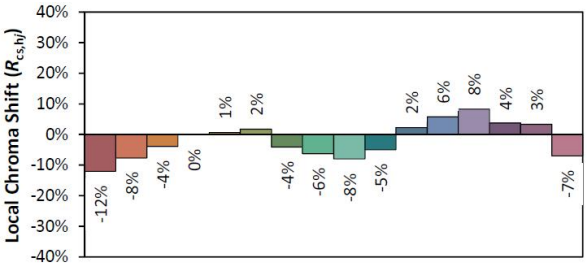
7/4 Step Quadrangle

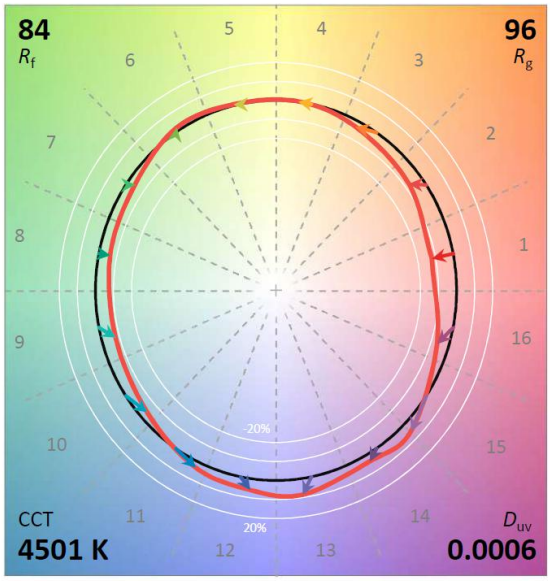


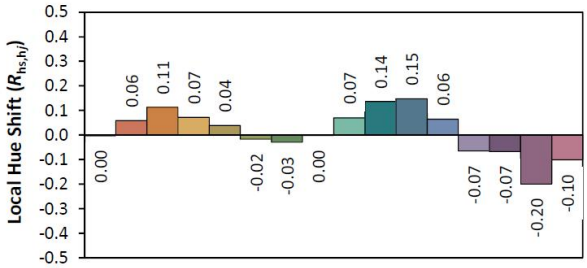
ANSI/IES TM-30-18 Color Rendition Report

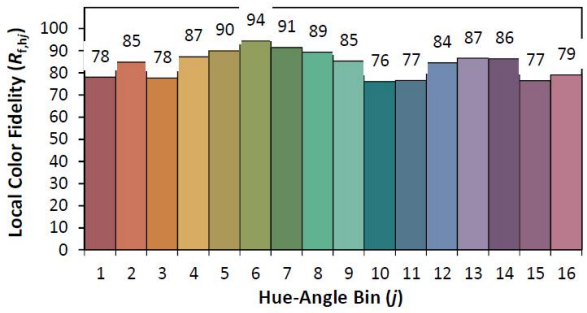
Source:	BL240412006-9A	**Manufacturer:**	RAB Lighting Inc
Date:	2024-07-04	**Model:**	H20047(TEMP17-150):TEMP17-150, at 120V

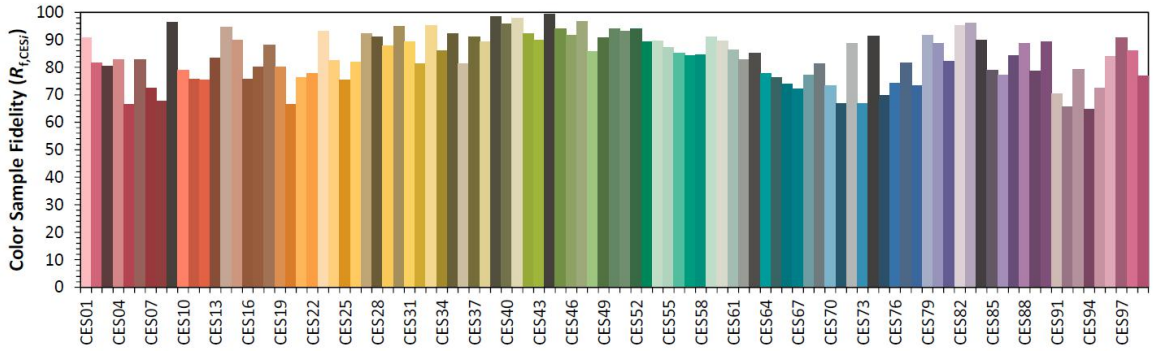












Notes: This is a recommended method for displaying ANSI/IES TM-30-18 information.

x	0.3610
y	0.3650
u'	0.2169
v'	0.4934

CIE 13.3-1995 (CRI)

R_a	84
R_9	12

Colors are for visual orientation purposes only. Created with the ANSI/IES TM-30-18 Calculator Version 2.00.

3.1.2 Model Number: H20047(TEMP17-150):TEMP17-150, at 277V

Electrical data

Input Voltage(V)	Frequency (Hz)	Input Current (A)	Power (W)	Power Factor
277.02	60	0.563	145.31	0.932

Photometric data

Luminous Flux (lm)	Efficacy (lm/W)	CCT (K)
18091.03	124.5	4472

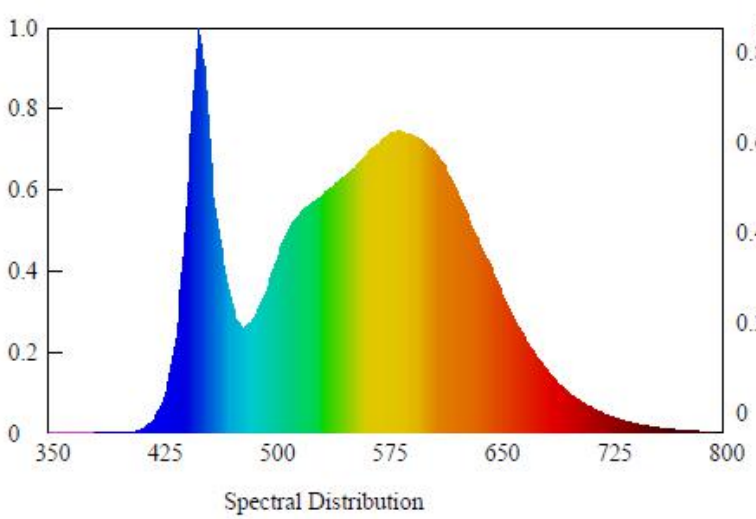
Chromaticity Coordinate

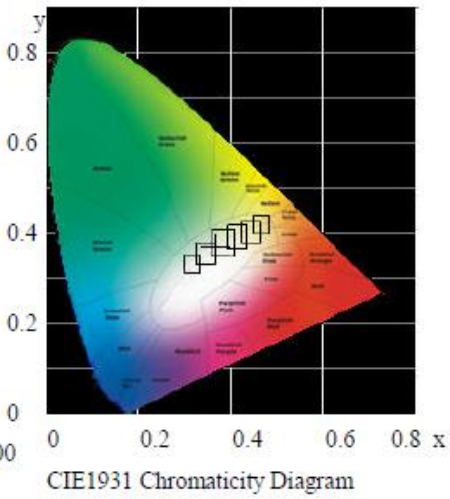
Duv	x	y	u'	v'
+0.00115	0.3623	0.3670	0.2170	0.4945

Color Rendering

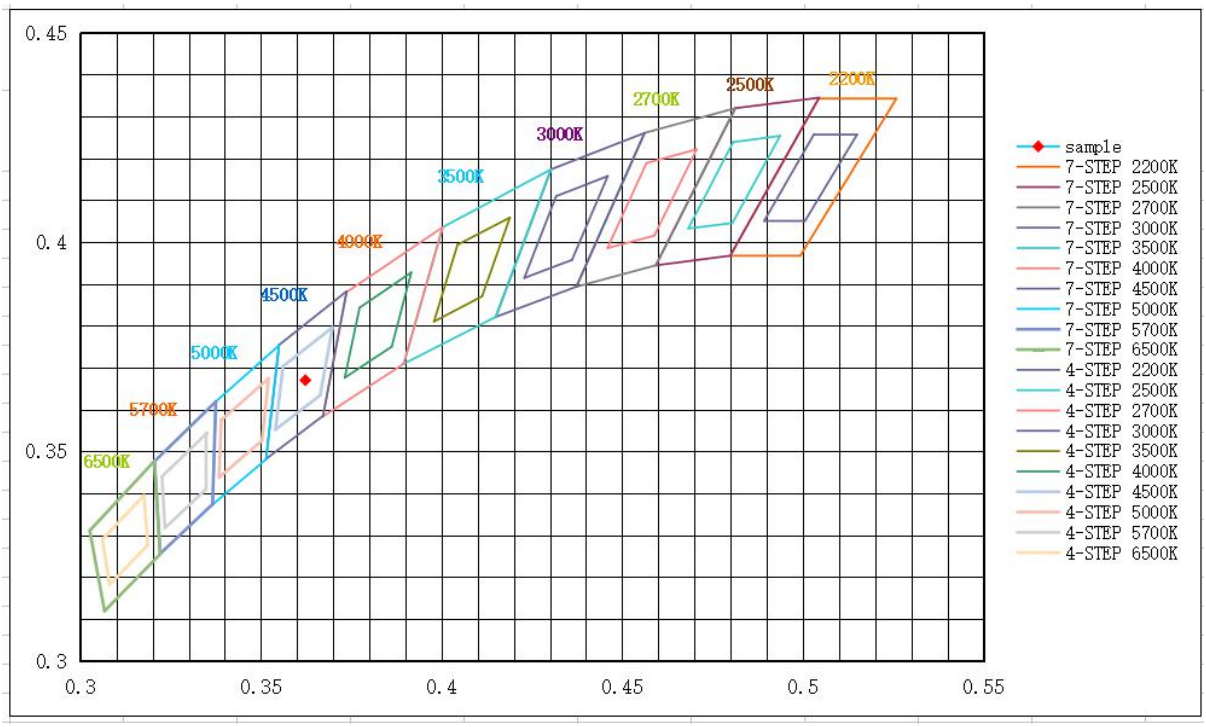
CRI	R9	Rf	Rg	Rcs,h1(%)
83.3	11	84	96	-12

Spectral Distribution



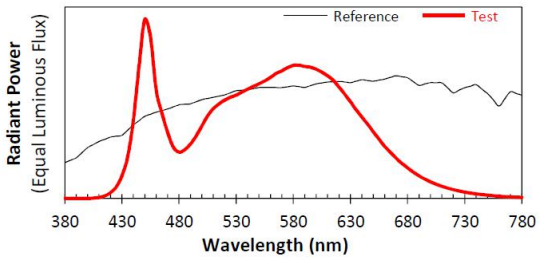


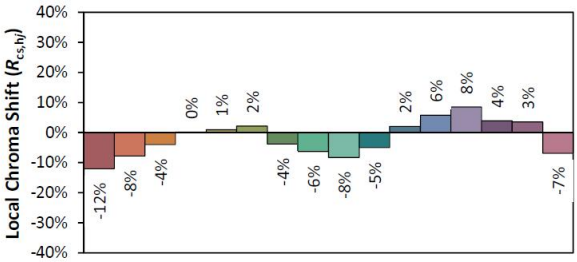
7/4 Step Quadrangle

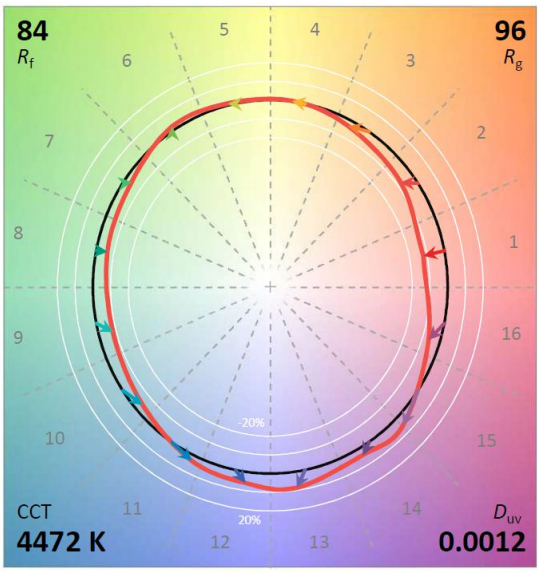


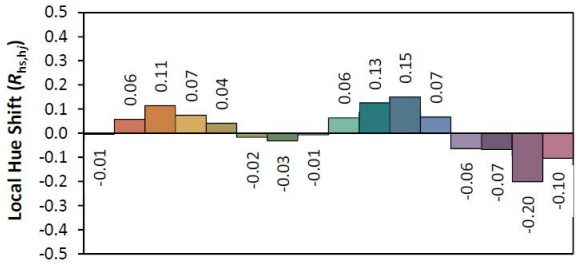
ANSI/IES TM-30-18 Color Rendition Report

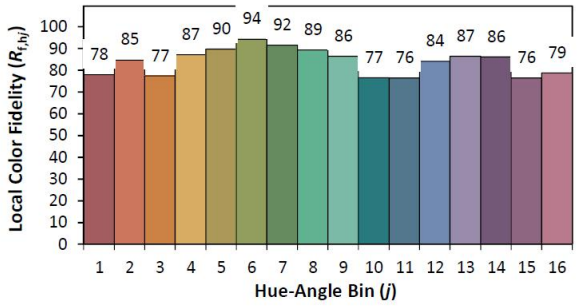
Source:	BL240412006-9A	**Manufacturer:**	RAB Lighting Inc
Date:	2024-07-04	**Model:**	H20047(TEMP17-150):TEMP17-150, at 277V

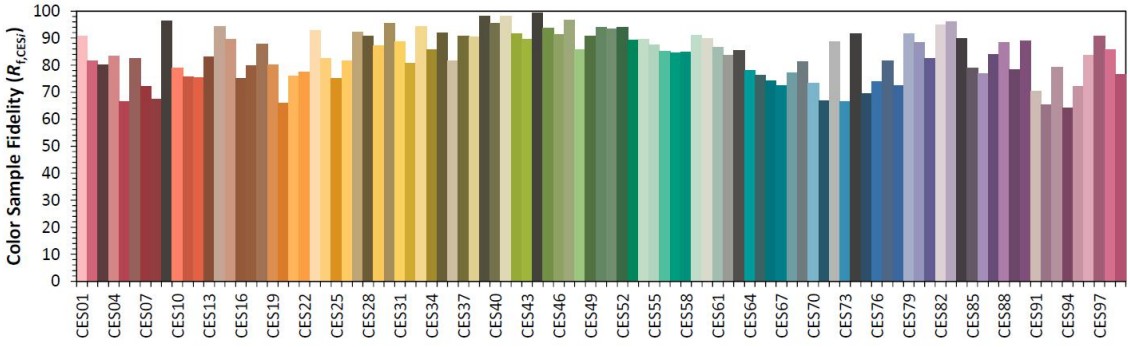












Notes: This is a recommended method for displaying ANSI/IES TM-30-18 information.

x	0.3623
y	0.3670
u'	0.2170
v'	0.4945

CIE 13.3-1995 (CRI)	
R_a	83
R_9	11

Colors are for visual orientation purposes only. Created with the ANSI/IES TM-30-18 Calculator Version 2.00.

3.2 Goniophotometer System (Total operating time for luminous intensity distribution: 1.0 hour)

3.2.1 Model Number: H20047(TEMP17-150):TEMP17-150, at 120V

Electrical data

Input Voltage(V)	Frequency (Hz)	Input Current (A)	Power (W)	Power Factor
120.02	60	1.2510	149.25	0.9938

Photometric data

Luminous Flux (lm)	Efficacy (lm/W)	Zonal Lumen in 0-60°(%lm)	Zonal Lumen in 0-90°(%lm)
18208.22	122.00	18.77	52.42

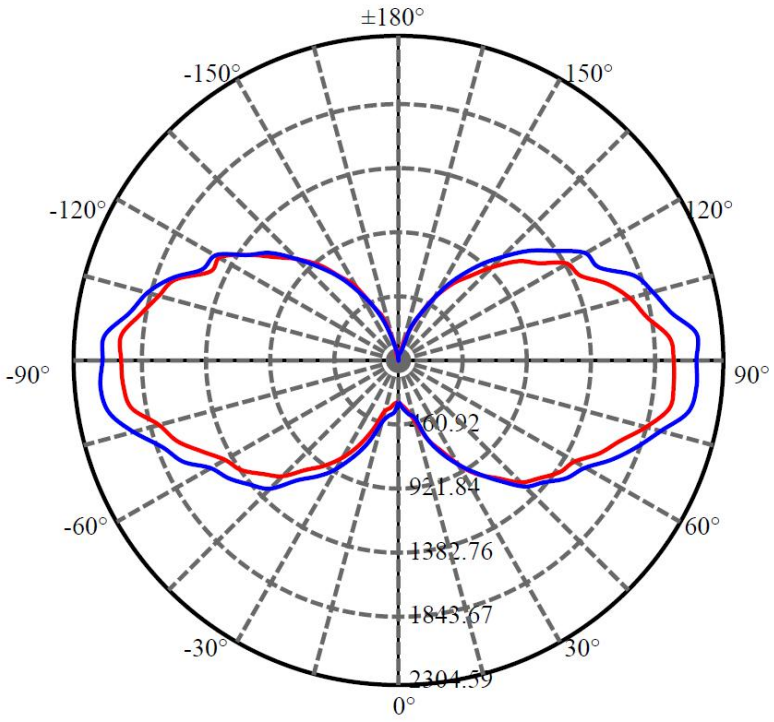
Zonal Flux Diagram

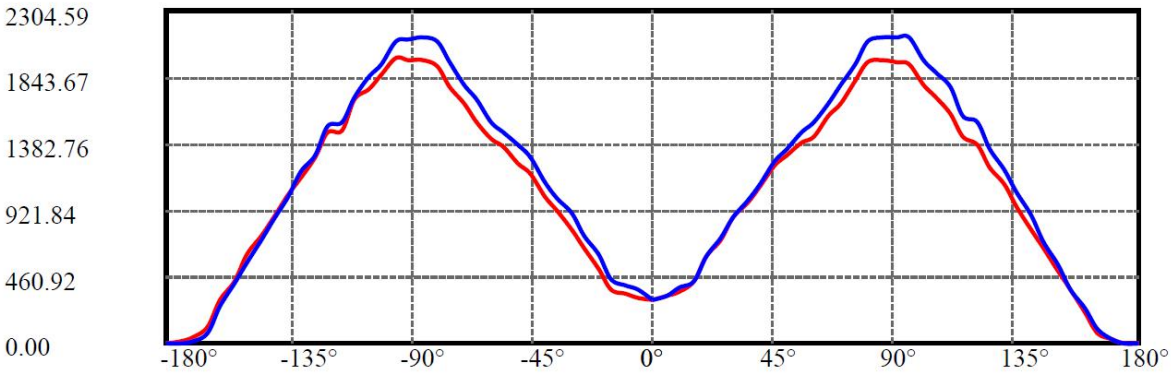
Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	298.251	0.000	0	0.00%	0.00%
5.0	329.753	7.508	7.508	0.00%	0.04%
10.0	373.920	25.173	32.68	0.00%	0.18%
15.0	419.727	47.079	79.759	0.00%	0.44%
20.0	566.013	81.239	160.998	0.00%	0.88%
25.0	711.797	134.019	295.016	0.00%	1.62%
30.0	852.897	198.013	493.029	0.00%	2.71%
35.0	988.254	271.122	764.152	0.00%	4.20%
40.0	1110.485	350.159	1114.31	0.00%	6.12%
45.0	1259.114	438.751	1553.061	0.00%	8.53%
50.0	1384.151	534.110	2087.171	0.00%	11.46%
55.0	1485.596	623.978	2711.15	0.00%	14.89%
60.0	1569.761	706.237	3417.387	0.00%	18.77%
65.0	1694.731	793.604	4210.991	0.00%	23.13%
70.0	1826.477	891.593	5102.583	0.00%	28.02%
75.0	1967.814	991.767	6094.35	0.00%	33.47%
80.0	2128.602	1096.087	7190.437	0.00%	39.49%
85.0	2165.981	1166.941	8357.379	0.00%	45.90%
90.0	2170.004	1187.227	9544.605	0.00%	52.42%
95.0	2156.825	1184.720	10729.325	0.00%	58.93%
100.0	2005.947	1131.125	11860.45	0.00%	65.14%
105.0	1906.805	1046.943	12907.393	0.00%	70.89%
110.0	1767.094	960.298	13867.691	0.00%	76.16%
115.0	1610.514	855.232	14722.923	0.00%	80.86%
120.0	1519.521	760.917	15483.841	0.00%	85.04%
125.0	1352.501	663.860	16147.7	0.00%	88.68%
130.0	1201.862	555.404	16703.104	0.00%	91.73%
135.0	1043.521	453.712	17156.816	0.00%	94.23%
140.0	882.972	356.706	17513.522	0.00%	96.18%
145.0	731.300	269.329	17782.851	0.00%	97.66%
150.0	573.727	192.174	17975.026	0.00%	98.72%
155.0	417.451	125.434	18100.46	0.00%	99.41%
160.0	254.639	70.490	18170.95	0.00%	99.80%
165.0	92.805	28.634	18199.584	0.00%	99.95%
170.0	28.461	7.193	18206.777	0.00%	99.99%
175.0	7.965	1.303	18208.08	0.00%	100.00%
180.0	4.122	0.145	18208.225	0.00%	100.00%

Luminous Intensity Distribution Diagram

Light Distribution Curve [Unit:cd]





C0/C180:

C90/C270:

Field angle(10%Imax):C0/180Left:162.9 Right:160.5

:C90/270Left:161.3 Right:161.1

Beam Angle(50%Imax):C0/180Left:136.3 Right:133.6

:C90/270Left:133.6 Right:134.5

Luminous Intensity Distribution Data

C/γ(°)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0
0.0	298.25	328.56	363.49	422.77	595.52	714.50	868.83	978.70	1091.75
22.5	298.25	327.50	363.92	431.66	606.10	758.11	883.22	1028.03	1148.70
45.0	298.25	321.79	374.08	432.09	595.10	700.95	867.56	992.25	1112.92
67.5	298.25	322.64	379.58	442.04	602.51	748.37	872.00	1010.46	1129.01
90.0	298.25	331.95	380.43	432.09	596.79	728.89	870.31	989.29	1106.57
112.5	298.25	321.79	373.23	419.81	553.60	726.56	851.26	990.56	1119.91
135.0	298.25	320.09	377.25	405.20	523.96	665.17	825.22	990.98	1123.93
157.5	298.25	316.71	358.62	391.02	498.56	678.51	816.11	948.85	1087.30
180.0	298.25	313.96	348.89	373.02	516.55	663.69	793.46	910.74	1019.98
202.5	298.25	314.17	362.86	396.52	493.27	679.78	818.65	956.26	1093.66
225.0	298.25	318.40	364.76	389.32	504.70	634.90	777.58	944.41	1067.19
247.5	298.25	319.46	358.62	393.34	512.53	674.27	804.89	933.40	1053.64
270.0	298.25	366.46	398.00	450.72	615.84	745.19	899.10	1007.49	1114.19
292.5	298.25	364.55	403.29	450.50	624.10	776.95	899.95	1070.58	1190.62
315.0	298.25	347.83	401.60	447.54	606.10	729.32	905.03	1022.74	1158.86
337.5	298.25	340.21	374.08	438.01	610.97	763.61	893.17	1037.34	1149.55
360.0	298.25	328.56	363.49	422.77	595.52	714.50	868.83	978.70	1091.75

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	1227.66	1303.88	1390.25	1433.23	1575.28	1666.31	1818.74	1950.20	1954.65
22.5	1272.33	1413.11	1512.19	1585.65	1697.64	1838.64	1975.18	2136.50	2146.45
45.0	1275.08	1385.59	1490.17	1554.53	1719.24	1813.44	1999.53	2130.36	2158.94
67.5	1243.33	1400.84	1479.17	1574.43	1675.41	1823.61	1966.08	2106.23	2127.82
90.0	1261.32	1350.45	1457.78	1529.55	1662.50	1789.31	1932.42	2085.06	2122.32
112.5	1275.93	1433.86	1530.40	1639.21	1753.11	1898.13	2026.84	2222.24	2258.23
135.0	1290.75	1398.93	1549.24	1636.25	1771.10	1920.14	2052.88	2232.83	2296.13
157.5	1256.67	1407.19	1494.41	1597.30	1707.59	1846.89	1980.27	2167.41	2212.71
180.0	1166.69	1246.93	1362.09	1416.71	1532.09	1665.25	1769.62	1920.35	1963.12
202.5	1248.20	1386.86	1484.67	1598.99	1697.01	1830.59	1965.02	2148.57	2204.04
225.0	1226.82	1343.68	1480.01	1564.69	1683.67	1830.38	1949.78	2132.27	2211.66
247.5	1202.47	1329.70	1436.61	1528.28	1629.90	1783.59	1894.31	2086.75	2135.66
270.0	1281.44	1376.07	1466.89	1534.42	1686.00	1788.04	1952.96	2085.27	2117.87
292.5	1310.86	1483.40	1571.89	1681.98	1793.76	1947.24	2093.10	2266.70	2289.99
315.0	1340.92	1456.09	1552.20	1635.19	1822.76	1915.48	2105.81	2244.26	2293.37
337.5	1265.35	1429.84	1511.56	1605.76	1708.65	1866.58	2002.49	2142.64	2162.75
360.0	1227.66	1303.88	1390.25	1433.23	1575.28	1666.31	1818.74	1950.20	1954.65

C/γ(°)	90.0	95.0	100.0	105.0	110.0	115.0	120.0	125.0	130.0
0.0	1950.84	1931.79	1791.85	1706.75	1582.26	1432.38	1380.30	1209.67	1102.97
22.5	2150.47	2108.77	1960.15	1866.79	1706.32	1584.59	1465.62	1315.31	1149.55
45.0	2155.13	2108.98	1954.86	1853.03	1700.39	1559.61	1463.71	1274.66	1165.00
67.5	2131.63	2084.00	1924.59	1858.54	1659.54	1586.50	1449.53	1271.49	1103.82
90.0	2112.37	2118.51	1966.08	1871.66	1775.34	1578.24	1532.51	1344.95	1206.92
112.5	2273.26	2273.26	2108.13	2021.34	1855.57	1718.39	1586.71	1433.86	1260.27
135.0	2300.78	2304.59	2146.45	2010.96	1924.59	1680.28	1625.88	1435.56	1272.33
157.5	2229.86	2238.33	2084.85	1992.97	1836.73	1693.41	1570.83	1416.71	1255.61
180.0	1964.18	1974.97	1859.17	1755.44	1690.02	1476.63	1455.03	1294.14	1148.06
202.5	2221.82	2231.34	2093.53	1983.44	1852.82	1697.64	1575.28	1432.17	1276.14
225.0	2219.91	2225.84	2096.70	1946.82	1890.72	1640.69	1594.33	1416.50	1249.68
247.5	2150.26	2155.98	2024.09	1917.18	1779.57	1658.90	1523.20	1395.54	1221.95
270.0	2104.11	2093.53	1939.41	1844.14	1705.90	1533.15	1498.43	1304.72	1191.04
292.5	2296.13	2270.30	2086.96	2021.97	1804.55	1714.58	1575.70	1422.85	1253.07
315.0	2291.47	2254.00	2086.75	1970.32	1806.67	1617.83	1535.69	1345.37	1217.92
337.5	2167.83	2135.02	1971.59	1887.54	1702.51	1595.39	1479.59	1326.53	1155.47
360.0	1950.84	1931.79	1791.85	1706.75	1582.26	1432.38	1380.30	1209.67	1102.97

C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	943.56	788.59	663.26	504.06	378.10	211.70	75.79	26.68	6.99
22.5	989.07	837.71	689.73	516.55	352.27	189.47	76.21	24.77	5.93
45.0	990.77	802.14	648.87	499.41	379.58	197.10	65.63	18.63	4.66
67.5	916.25	782.88	640.61	518.25	377.47	193.07	61.82	11.86	4.23
90.0	1046.66	888.52	701.37	543.65	374.29	246.63	96.54	22.44	5.08
112.5	1111.65	952.03	793.25	618.17	458.97	280.51	110.09	30.91	5.72
135.0	1120.33	952.45	800.66	649.93	448.60	311.84	111.36	39.59	9.95
157.5	1108.90	941.65	781.82	613.73	468.50	306.33	124.69	45.94	12.91
180.0	1024.22	877.72	742.44	613.94	423.62	307.60	117.50	45.94	14.18
202.5	1130.49	954.57	798.12	623.04	488.19	316.71	136.13	47.42	13.76
225.0	1112.92	944.83	786.48	649.29	434.63	310.57	113.47	41.49	12.28
247.5	1089.42	925.78	773.98	598.48	467.86	295.33	106.91	25.62	8.05
270.0	1010.24	857.82	722.54	554.45	417.48	260.61	71.56	12.49	5.72
292.5	1079.47	917.52	752.39	585.36	425.95	223.13	63.09	13.55	4.87
315.0	1032.69	857.40	710.26	549.79	396.52	223.35	74.73	21.59	6.35
337.5	989.71	845.96	695.02	541.54	387.20	200.27	79.39	26.46	6.77
360.0	943.56	788.59	663.26	504.06	378.10	211.70	75.79	26.68	6.99

C/γ(°)	180.0
0.0	4.12
22.5	4.12
45.0	4.12
67.5	4.12
90.0	4.12
112.5	4.12
135.0	4.12
157.5	4.12
180.0	4.12
202.5	4.12
225.0	4.12
247.5	4.12
270.0	4.12
292.5	4.12
315.0	4.12
337.5	4.12
360.0	4.12

3.2.2 Model Number: H20047(TEMP17-150):TEMP17-150, at 277V

Electrical data

Input Voltage(V)	Frequency (Hz)	Input Current (A)	Power (W)	Power Factor
277.08	60	0.5640	145.34	0.9309

Photometric data

Luminous Flux (lm)	Efficacy (lm/W)	Zonal Lumen in 0-60°(%lm)	Zonal Lumen in 0-90°(%lm)
18151.70	124.89	18.78	52.43

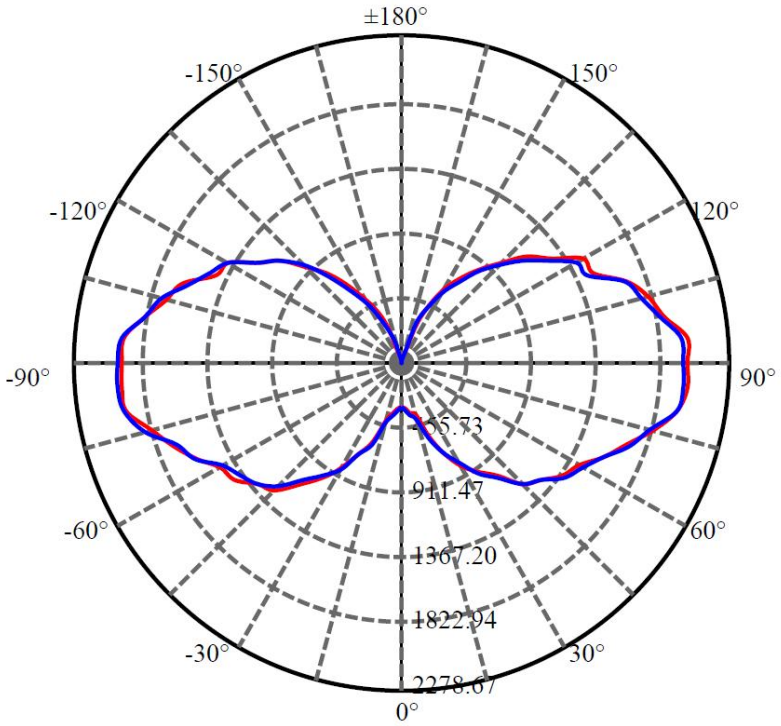
Zonal Flux Diagram

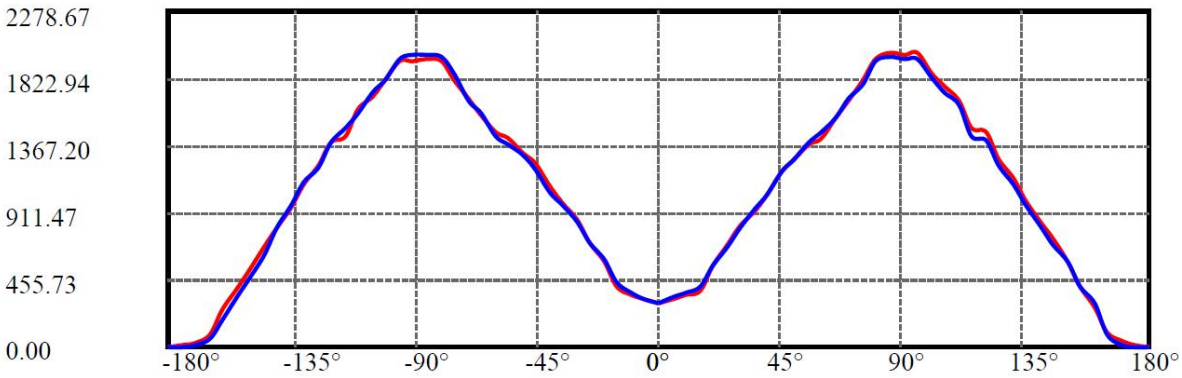
Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	299.768	0.000	0	0.00%	0.00%
5.0	330.888	7.539	7.539	0.00%	0.04%
10.0	373.458	25.197	32.736	0.00%	0.18%
15.0	415.987	46.829	79.565	0.00%	0.44%
20.0	567.155	81.025	160.59	0.00%	0.88%
25.0	713.057	134.271	294.861	0.00%	1.62%
30.0	848.869	197.663	492.524	0.00%	2.71%
35.0	983.412	269.816	762.34	0.00%	4.20%
40.0	1104.247	348.310	1110.65	0.00%	6.12%
45.0	1257.536	437.303	1547.953	0.00%	8.53%
50.0	1382.976	533.554	2081.507	0.00%	11.47%
55.0	1482.067	622.956	2704.463	0.00%	14.90%
60.0	1564.735	704.259	3408.722	0.00%	18.78%
65.0	1688.217	790.799	4199.521	0.00%	23.14%
70.0	1819.910	888.280	5087.801	0.00%	28.03%
75.0	1962.219	988.588	6076.389	0.00%	33.48%
80.0	2122.274	1092.896	7169.285	0.00%	39.50%
85.0	2161.616	1164.036	8333.321	0.00%	45.91%
90.0	2162.345	1183.934	9517.255	0.00%	52.43%
95.0	2151.527	1181.172	10698.427	0.00%	58.94%
100.0	1996.280	1127.059	11825.486	0.00%	65.15%
105.0	1898.297	1042.080	12867.566	0.00%	70.89%
110.0	1761.660	956.654	13824.22	0.00%	76.16%
115.0	1605.333	852.544	14676.764	0.00%	80.86%
120.0	1515.696	758.728	15435.492	0.00%	85.04%
125.0	1348.780	662.115	16097.608	0.00%	88.68%
130.0	1193.749	552.830	16650.438	0.00%	91.73%
135.0	1036.948	450.745	17101.183	0.00%	94.21%
140.0	882.930	355.481	17456.664	0.00%	96.17%
145.0	736.651	270.215	17726.879	0.00%	97.66%
150.0	572.409	192.768	17919.647	0.00%	98.72%
155.0	418.107	125.351	18044.998	0.00%	99.41%
160.0	253.636	70.453	18115.451	0.00%	99.80%
165.0	87.408	28.107	18143.558	0.00%	99.96%
170.0	27.025	6.788	18150.346	0.00%	99.99%
175.0	7.239	1.226	18151.572	0.00%	100.00%
180.0	3.826	0.132	18151.704	0.00%	100.00%

Luminous Intensity Distribution Diagram

Light Distribution Curve [Unit:cd]





C0/C180:

C90/C270:

Field angle(10%Imax):C0/180Left:161.6 Right:162.1

:C90/270Left:159.5 Right:162.4

Beam Angle(50%Imax):C0/180Left:133.4 Right:134.5

:C90/270Left:134.0 Right:134.1

Luminous Intensity Distribution Data

C/γ(°)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0
0.0	299.77	324.78	353.52	380.97	545.63	687.17	820.93	919.46	1030.53
22.5	299.77	334.29	378.81	412.52	535.26	716.77	836.48	987.75	1116.54
45.0	299.77	339.91	384.42	410.79	542.17	671.39	835.19	977.59	1109.62
67.5	299.77	345.96	374.48	412.30	560.75	722.82	844.48	983.43	1095.36
90.0	299.77	336.88	373.84	407.33	552.33	686.30	810.12	934.59	1038.96
112.5	299.77	336.45	384.86	421.81	549.73	717.42	842.97	991.85	1123.88
135.0	299.77	334.51	383.99	423.75	573.29	705.75	850.75	993.37	1124.53
157.5	299.77	330.83	370.38	426.56	585.17	745.08	881.00	1016.49	1134.47
180.0	299.77	326.73	356.33	406.03	587.33	710.94	860.25	973.70	1091.26
202.5	299.77	325.86	366.71	423.75	596.84	763.88	890.94	1036.15	1167.53
225.0	299.77	325.22	375.35	431.32	587.77	709.21	866.52	1010.65	1126.48
247.5	299.77	323.49	379.45	434.99	589.71	753.29	871.28	1023.40	1148.95
270.0	299.77	328.67	373.62	435.21	598.14	707.70	847.94	957.06	1054.30
292.5	299.77	327.16	375.13	421.38	589.06	733.84	848.15	981.48	1102.49
315.0	299.77	329.32	384.64	409.06	551.03	680.68	853.77	992.29	1118.27
337.5	299.77	324.14	359.79	398.04	530.29	696.67	821.14	955.33	1084.77
360.0	299.77	324.78	353.52	380.97	545.63	687.17	820.93	919.46	1030.53

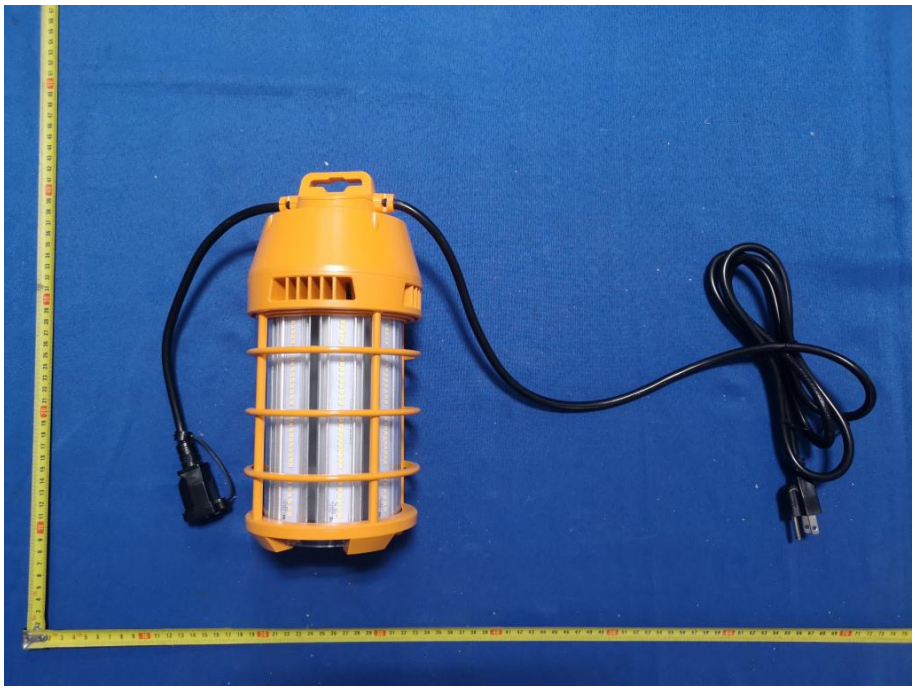
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	1186.12	1273.42	1366.77	1419.28	1560.39	1667.35	1817.53	1949.13	1991.92
22.5	1257.21	1411.50	1501.61	1611.17	1710.57	1856.21	1989.33	2182.73	2218.16
45.0	1286.82	1387.51	1514.79	1579.19	1726.56	1848.43	2029.52	2171.92	2244.53
67.5	1238.63	1384.49	1482.81	1567.52	1671.24	1839.79	1956.91	2148.15	2179.27
90.0	1188.06	1274.50	1381.25	1452.77	1554.55	1687.88	1786.42	1938.33	1973.77
112.5	1267.15	1416.47	1504.20	1616.79	1728.94	1862.05	1998.18	2181.65	2228.54
135.0	1311.23	1404.59	1532.73	1623.48	1773.02	1900.08	2055.02	2206.50	2278.67
157.5	1272.34	1430.73	1505.72	1605.12	1714.89	1868.75	1993.43	2177.11	2219.24
180.0	1247.27	1314.91	1412.80	1453.64	1577.24	1677.94	1805.86	1942.87	1957.78
202.5	1308.21	1451.48	1556.28	1639.69	1741.47	1900.73	2020.44	2208.22	2239.13
225.0	1317.29	1421.01	1544.83	1619.16	1763.51	1881.50	2048.97	2195.04	2247.55
247.5	1283.36	1449.32	1547.64	1640.99	1749.03	1897.27	2035.78	2197.64	2237.61
270.0	1201.03	1302.81	1371.96	1436.35	1588.05	1673.83	1849.08	1963.39	1982.41
292.5	1220.04	1393.13	1486.05	1580.05	1691.77	1838.28	1978.09	2140.59	2157.66
315.0	1297.62	1413.01	1521.27	1603.82	1765.67	1874.80	2052.86	2199.80	2244.53
337.5	1238.20	1398.75	1482.38	1586.75	1694.58	1843.68	1978.09	2153.34	2185.10
360.0	1186.12	1273.42	1366.77	1419.28	1560.39	1667.35	1817.53	1949.13	1991.92

C/γ(°)	90.0	95.0	100.0	105.0	110.0	115.0	120.0	125.0	130.0
0.0	1987.60	1998.83	1853.84	1771.51	1669.08	1479.35	1457.53	1274.93	1140.74
22.5	2225.08	2225.08	2058.47	1976.36	1814.94	1685.72	1577.46	1416.69	1251.59
45.0	2243.23	2234.59	2088.94	1945.46	1854.70	1624.78	1593.45	1387.08	1237.33
67.5	2188.56	2178.40	2012.23	1929.25	1760.92	1651.79	1532.94	1377.57	1205.78
90.0	1958.86	1955.83	1830.93	1721.81	1645.53	1429.44	1403.51	1233.66	1101.84
112.5	2239.34	2244.10	2080.52	1989.33	1827.47	1695.23	1558.23	1415.17	1240.57
135.0	2269.59	2267.43	2104.93	1977.22	1870.26	1650.71	1583.72	1397.67	1258.08
157.5	2219.46	2216.44	2048.53	1954.97	1792.25	1659.57	1523.87	1382.76	1203.19
180.0	1941.14	1937.25	1809.97	1704.73	1617.00	1425.76	1389.24	1225.01	1105.52
202.5	2243.01	2222.49	2067.98	1970.53	1809.54	1686.80	1537.91	1406.10	1219.61
225.0	2248.20	2219.24	2075.33	1937.03	1837.63	1631.70	1555.63	1366.55	1227.39
247.5	2247.55	2235.24	2062.15	1986.73	1815.80	1699.12	1562.55	1404.80	1197.36
270.0	1978.09	1949.78	1806.51	1732.83	1588.48	1481.30	1391.40	1217.88	1112.00
292.5	2164.79	2130.22	1968.36	1895.97	1711.43	1600.80	1486.92	1337.81	1166.45
315.0	2250.36	2226.16	2060.20	1941.14	1814.72	1632.13	1559.74	1360.72	1229.98
337.5	2192.67	2183.37	2011.58	1937.90	1756.81	1651.14	1537.05	1376.06	1202.54
360.0	1987.60	1998.83	1853.84	1771.51	1669.08	1479.35	1457.53	1274.93	1140.74

C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	984.29	847.07	729.52	587.33	412.73	275.95	94.86	36.74	10.37
22.5	1103.36	950.58	797.37	615.42	471.72	285.89	105.88	37.17	11.02
45.0	1066.62	901.31	767.77	590.57	418.57	277.24	94.43	31.98	8.21
67.5	1055.82	911.04	759.99	599.22	446.44	253.26	64.18	17.72	6.05
90.0	967.87	827.84	697.54	575.23	413.38	296.04	89.03	20.53	5.19
112.5	1107.68	932.64	783.76	603.76	452.93	268.60	95.73	20.10	5.19
135.0	1079.80	922.70	766.69	599.43	423.32	270.11	90.97	24.20	6.92
157.5	1044.36	889.43	735.79	574.80	419.00	231.00	93.35	33.49	9.08
180.0	948.20	806.23	679.39	522.07	391.99	252.61	90.11	31.77	9.51
202.5	1064.03	899.80	745.29	567.89	400.85	223.01	91.62	32.41	9.08
225.0	1048.04	875.60	722.82	536.98	397.39	249.37	82.76	25.72	7.13
247.5	1049.12	891.80	731.47	584.09	435.21	242.89	85.36	20.10	5.62
270.0	960.09	804.72	628.39	467.40	338.18	182.60	63.31	13.18	4.32
292.5	1006.33	866.52	727.79	560.32	412.08	229.49	72.39	19.66	4.11
315.0	1049.12	891.80	757.83	587.33	421.38	259.09	88.17	31.33	6.05
337.5	1056.46	907.79	755.02	586.68	434.56	261.04	96.38	36.30	8.00
360.0	984.29	847.07	729.52	587.33	412.73	275.95	94.86	36.74	10.37

C/γ(°)	180.0
0.0	3.83
22.5	3.83
45.0	3.83
67.5	3.83
90.0	3.83
112.5	3.83
135.0	3.83
157.5	3.83
180.0	3.83
202.5	3.83
225.0	3.83
247.5	3.83
270.0	3.83
292.5	3.83
315.0	3.83
337.5	3.83
360.0	3.83

Photo Document



****End of test report****