

Photometric Test Report

Relevant Standards

- ☒ ANSI/IES LM-79-2019
- ☒ ANSI C82.77-2017

Prepared For

RAB Lighting Inc.

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Prepared By

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Issue Date: 2025-01-04

Revised Date: N/A

1.0 Test Summary

DLC Technical Requirements V5.1

Direct Linear Ambient Luminaires					
Requirement Category		Test Method	Requirements		Test Value
Luminaire Output (lm) (Goniophotometer – Section 4.2)		ANSI/IES LM-79:2019	375 lm/ft		757
Minimum Luminaire Efficacy (lm/W) (Goniophotometer – Section 4.2)		ANSI/IES LM-79:2019	Standard	Premium	147.0
			115	130	
Power (Input Wattage) (W) (Goniophotometer – Section 4.2)		ANSI/IES LM-79:2019	Worst Case		10.3
Total Harmonic Distortion (A%) (THD & PF – Section 4.3)		ANSI C82.77:2002 ANSI C82-77-10:2020	20.00%	120V	8.73
				277V	21.77
Power Factor (THD & PF – Section 4.3)		ANSI C82.77:2002 ANSI C82-77-10:2020	0.9	120V	0.983
				277V	0.847
Allowable CCTs* (K) (Integrating Sphere – Section 4.1)		ANSI/IES LM-79:2019	7 steps	3465±245	3431
			4 steps	3465±124	
Minimum CRI (Integrating Sphere – Section 4.1)		ANSI/IES LM-79:2019 CIE13.3-1995	≥80		84.1
Minimum R9 (Integrating Sphere – Section 4.1)		ANSI/IES LM-79-2019 CIE13.3-1995	≥0		12
Minimum Rf (Integrating Sphere – Section 4.1)		ANSI/IES TM-30-18	≥70		85
Minimum Rg (Integrating Sphere – Section 4.1)		ANSI/IES TM-30-18	≥89		95
IES Rcs,h1 (Integrating Sphere – Section 4.1)		ANSI/IES TM-30-18	-12%≤IES Rcs,h1≤+23%		-12%
Zonal Lumen Requirement (0°-60°) (Goniophotometer – Section 4.2)		ANSI/IES LM-79:2019	≥40%		62.7%
Discomfort Glare (UGR) (Goniophotometer – Section 4.2)		ANSI/IES LM-79:2019	Standard	Premium	26.7
			N/A	<22	
Input Voltage (V)					
(Goniophotometer – Section 4.2)		ANSI/IES LM-79:2019	Worst Cast		277.0
(Goniophotometer – Section 4.2)			Non-Worst Case		120.0
Input Current (A)					
(Goniophotometer – Section 4.2)		ANSI/IES LM-79:2019	Worst Case		0.044
(Goniophotometer – Section 4.2)			Non-Worst Case		0.081
Power (Input Wattage – W)					
(Goniophotometer – Section 4.2)		ANSI/IES LM-79:2019	Worst Case		10.3
(Goniophotometer – Section 4.2)			Non-Worst Case		9.6

2.0 Test List

Test Item	Test	Test Date	Model Number	Build Level	Sample No.
1	Integrating Sphere Test	2025-01-02	STRP2H @10W3500K	-	241225004-S1
2	Goniophotometer Test	2025-01-02	STRP2H @10W3500K	-	241225004-S1
3	THD and PF Test	2025-01-02	STRP2H @10W3500K	-	241225004-S1

Remark (If any):

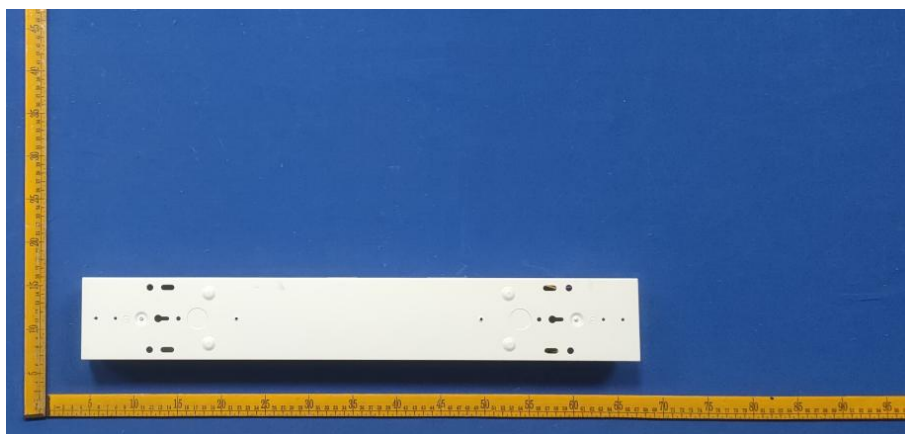
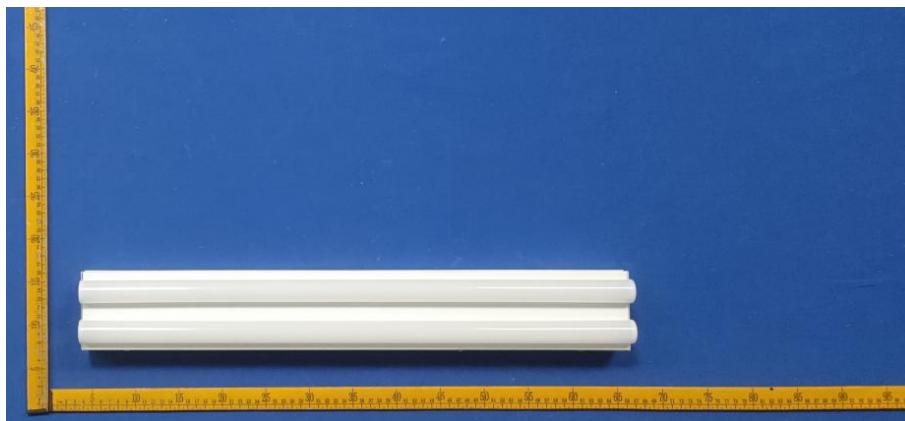
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3. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the U.S. Government.

3.0 Product Description

Luminaire Description: Model No. STRP2H @10W3500K, color tunable from 3500K, 4000K and 5000K.

Electrical Specification: 120-277Vac, 50/60Hz

Photos of Luminaire Characteristics



4.0 LM-79 Measurement and Test Results

4.1 Integrating Sphere Test

Model No.	STRP2H @10W3500K	Sample ID	241225004-S1
Operate time (Min.)	10	Stabilization time (Min.)	60
Temperature (°C)	25.4	Humidity (%RH)	41.0

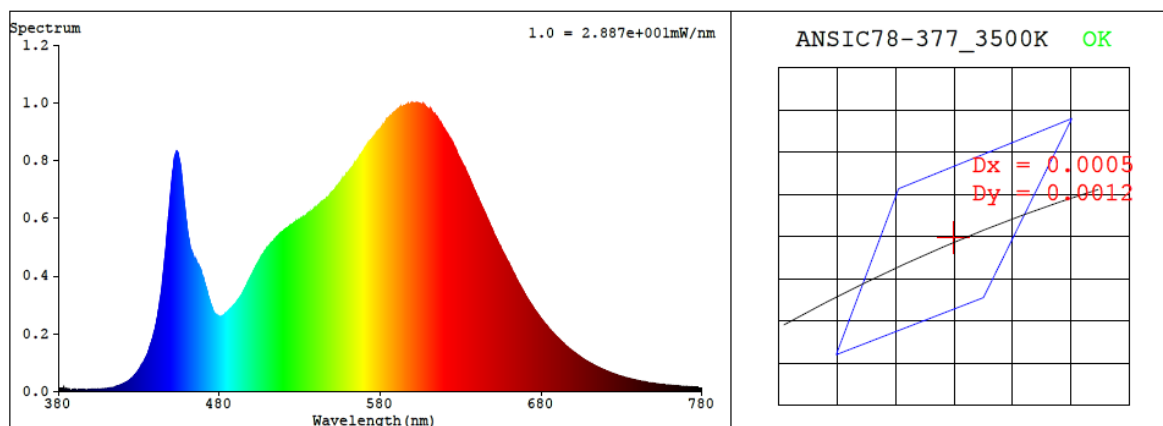
Test Method
<p>The Samples were tested according to the ANSI/IES LM-79:2019.</p> <p>Photometric parameters were measured using an integrating sphere, a spectroradiometer and software. The ambient temperature condition inside the sphere was maintained at 25±1°C.</p> <p>The sample measurements were made using a spectroradiometer connected by a fiber optic cable and detector through the detector port of the integrating sphere.</p> <p>The voltage of an AC power supply (RMS voltage) or DC power supply (instantaneous voltage) applied to the device under test shall be regulated to within ±0.2 percent under load.</p> <p>The sample was measured using 4π geometry and operated at rated voltage and was stabilized before measurement. Chromaticity coordinates, correlated color temperature and color rendering index were calculated from the spectral radiant flux measurements taken at 1 nm intervals over the range of 380 to 780nm.</p>

Test Result

Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor
120.0	60	0.081	9.6	0.983
277.0	60	0.044	10.3	0.847

CCT (K)	CRI	R9	Duv	Rf	Rg	IES Rcs,h1
3431	84.1	12	0.0004	85	95	-12%

4.1 Integrating Sphere Test



Colorimetric Parameters

Chromaticity Coordinate: $x = 0.4097$ $y = 0.3939$ / $u' = 0.2373$ $v' = 0.5132$ ($duv=4.39e-04$)

CCT= 3431K Prcp WL: $L_d=581.0nm$ Purity=41.2%

Peak WL: $L_p=602nm$ FWHM: $=144.6nm$ Ratio: $R=20.7\%$ $G=76.0\%$ $B=3.3\%$

Render Index: $R_a = 84.1$ AvgR = 78.3 TM30: $R_f=85$ $R_g=95$

EEL: 0.09339 A++ Highest

R1 =83 R2 =92 R3 =96 R4 =82 R5 =83 R6 =90 R7 =84

R8 =63 R9 =12 R10=81 R11=81 R12=67 R13=85 R14=99 R15=76

4.1 Integrating Sphere Test

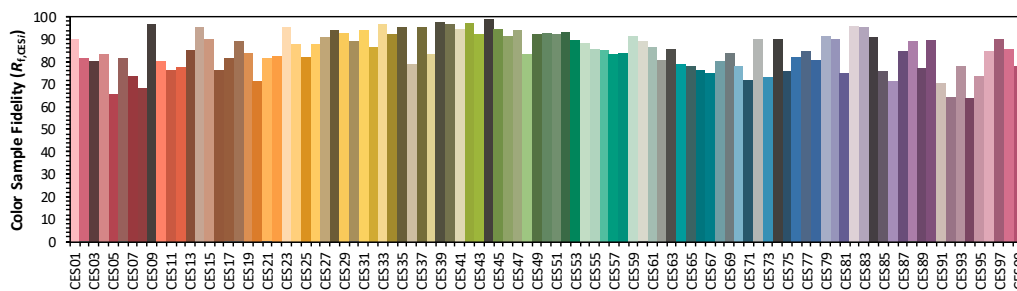
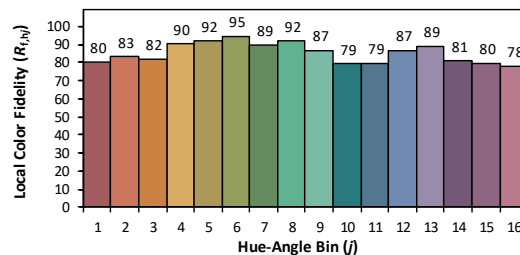
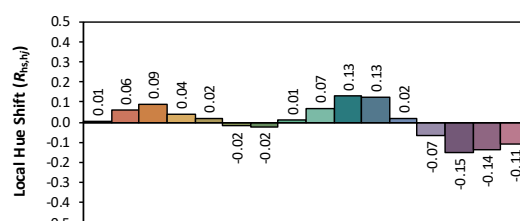
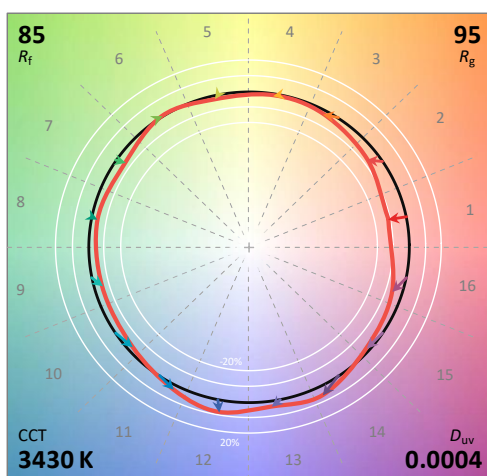
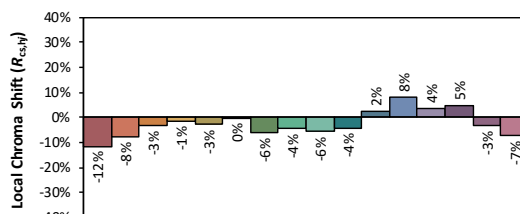
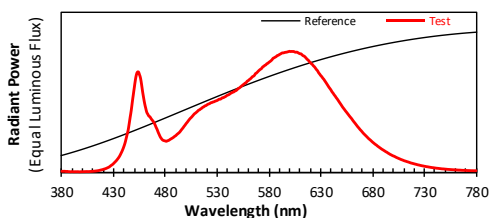
ANSI/IES TM-30-18 Color Rendition Report

Source: 1 CIE F1

Manufacturer: RAB Lighting Inc.

Date: 2025/1/4

Model: STRP2H @10W3500K



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

x 0.4097
 y 0.3938
 u' 0.2373
 v' 0.5132

CIE 13.3-1995
(CRI)
 R_a 84
 R_g 12

4.1 Integrating Sphere Test

Spectral Distribution over Visible Wavelength											
WL (nm)	Radiant (W/nm)	WL (nm)	Radiant (W/nm)	WL (nm)	Radiant (W/nm)	WL (nm)	Radiant (W/nm)	WL (nm)	Radiant (W/nm)	WL (nm)	Radiant (W/nm)
380	1.02E-05	447	5.12E-04	514	5.25E-04	581	9.15E-04	648	5.81E-04	715	8.56E-05
381	1.02E-05	448	5.79E-04	515	5.30E-04	582	9.22E-04	649	5.68E-04	716	8.26E-05
382	1.00E-05	449	6.42E-04	516	5.38E-04	583	9.30E-04	650	5.56E-04	717	7.91E-05
383	1.04E-05	450	7.04E-04	517	5.41E-04	584	9.42E-04	651	5.42E-04	718	7.71E-05
384	7.90E-06	451	7.63E-04	518	5.49E-04	585	9.46E-04	652	5.31E-04	719	7.48E-05
385	9.50E-06	452	8.07E-04	519	5.52E-04	586	9.52E-04	653	5.19E-04	720	7.24E-05
386	7.60E-06	453	8.28E-04	520	5.57E-04	587	9.56E-04	654	5.08E-04	721	7.01E-05
387	7.40E-06	454	8.29E-04	521	5.63E-04	588	9.64E-04	655	4.97E-04	722	6.81E-05
388	6.10E-06	455	8.06E-04	522	5.66E-04	589	9.67E-04	656	4.86E-04	723	6.56E-05
389	6.80E-06	456	7.78E-04	523	5.70E-04	590	9.73E-04	657	4.75E-04	724	6.33E-05
390	7.60E-06	457	7.25E-04	524	5.76E-04	591	9.77E-04	658	4.64E-04	725	6.17E-05
391	6.20E-06	458	6.66E-04	525	5.78E-04	592	9.83E-04	659	4.53E-04	726	5.93E-05
392	6.30E-06	459	6.15E-04	526	5.82E-04	593	9.87E-04	660	4.43E-04	727	5.75E-05
393	6.70E-06	460	5.67E-04	527	5.84E-04	594	9.87E-04	661	4.31E-04	728	5.55E-05
394	6.50E-06	461	5.31E-04	528	5.88E-04	595	9.90E-04	662	4.19E-04	729	5.40E-05
395	6.70E-06	462	4.97E-04	529	5.91E-04	596	9.92E-04	663	4.09E-04	730	5.19E-05
396	6.50E-06	463	4.81E-04	530	5.94E-04	597	9.93E-04	664	3.98E-04	731	5.08E-05
397	5.40E-06	464	4.66E-04	531	6.00E-04	598	9.95E-04	665	3.86E-04	732	4.86E-05
398	6.30E-06	465	4.60E-04	532	6.05E-04	599	9.98E-04	666	3.75E-04	733	4.77E-05
399	6.80E-06	466	4.47E-04	533	6.05E-04	600	1.00E-03	667	3.66E-04	734	4.60E-05
400	6.90E-06	467	4.35E-04	534	6.10E-04	601	9.98E-04	668	3.55E-04	735	4.45E-05
401	6.90E-06	468	4.25E-04	535	6.17E-04	602	9.99E-04	669	3.46E-04	736	4.29E-05
402	7.40E-06	469	4.11E-04	536	6.18E-04	603	9.98E-04	670	3.36E-04	737	4.17E-05
403	7.60E-06	470	3.94E-04	537	6.23E-04	604	9.98E-04	671	3.26E-04	738	4.03E-05
404	8.00E-06	471	3.73E-04	538	6.26E-04	605	9.94E-04	672	3.17E-04	739	3.95E-05
405	7.70E-06	472	3.55E-04	539	6.33E-04	606	9.92E-04	673	3.09E-04	740	3.79E-05
406	7.60E-06	473	3.33E-04	540	6.38E-04	607	9.93E-04	674	3.00E-04	741	3.68E-05
407	8.20E-06	474	3.14E-04	541	6.41E-04	608	9.89E-04	675	2.91E-04	742	3.55E-05
408	8.90E-06	475	2.95E-04	542	6.47E-04	609	9.84E-04	676	2.82E-04	743	3.48E-05
409	9.40E-06	476	2.82E-04	543	6.53E-04	610	9.80E-04	677	2.75E-04	744	3.37E-05
410	1.00E-05	477	2.71E-04	544	6.58E-04	611	9.79E-04	678	2.68E-04	745	3.26E-05
411	1.11E-05	478	2.65E-04	545	6.63E-04	612	9.71E-04	679	2.60E-04	746	3.16E-05
412	1.18E-05	479	2.62E-04	546	6.65E-04	613	9.64E-04	680	2.52E-04	747	3.03E-05
413	1.30E-05	480	2.60E-04	547	6.72E-04	614	9.60E-04	681	2.45E-04	748	2.98E-05
414	1.39E-05	481	2.58E-04	548	6.75E-04	615	9.52E-04	682	2.38E-04	749	2.93E-05
415	1.54E-05	482	2.62E-04	549	6.81E-04	616	9.43E-04	683	2.31E-04	750	2.81E-05
416	1.71E-05	483	2.64E-04	550	6.90E-04	617	9.33E-04	684	2.25E-04	751	2.77E-05
417	1.94E-05	484	2.70E-04	551	6.96E-04	618	9.27E-04	685	2.18E-04	752	2.65E-05
418	2.14E-05	485	2.76E-04	552	7.01E-04	619	9.15E-04	686	2.12E-04	753	2.59E-05
419	2.34E-05	486	2.80E-04	553	7.09E-04	620	9.08E-04	687	2.05E-04	754	2.53E-05
420	2.60E-05	487	2.86E-04	554	7.16E-04	621	8.98E-04	688	1.99E-04	755	2.47E-05
421	2.90E-05	488	2.92E-04	555	7.24E-04	622	8.91E-04	689	1.93E-04	756	2.41E-05
422	3.12E-05	489	2.99E-04	556	7.29E-04	623	8.80E-04	690	1.88E-04	757	2.34E-05
423	3.49E-05	490	3.04E-04	557	7.38E-04	624	8.72E-04	691	1.82E-04	758	2.30E-05
424	3.87E-05	491	3.13E-04	558	7.41E-04	625	8.60E-04	692	1.77E-04	759	2.23E-05
425	4.27E-05	492	3.20E-04	559	7.53E-04	626	8.48E-04	693	1.71E-04	760	2.19E-05
426	4.76E-05	493	3.27E-04	560	7.58E-04	627	8.39E-04	694	1.67E-04	761	2.13E-05
427	5.46E-05	494	3.36E-04	561	7.66E-04	628	8.23E-04	695	1.61E-04	762	2.08E-05
428	6.09E-05	495	3.47E-04	562	7.72E-04	629	8.13E-04	696	1.56E-04	763	2.01E-05
429	6.68E-05	496	3.58E-04	563	7.80E-04	630	8.00E-04	697	1.50E-04	764	1.99E-05
430	7.50E-05	497	3.68E-04	564	7.90E-04	631	7.91E-04	698	1.46E-04	765	1.96E-05
431	8.39E-05	498	3.81E-04	565	7.94E-04	632	7.79E-04	699	1.41E-04	766	1.88E-05
432	9.25E-05	499	3.91E-04	566	8.02E-04	633	7.69E-04	700	1.37E-04	767	1.83E-05
433	1.02E-04	500	4.04E-04	567	8.16E-04	634	7.56E-04	701	1.34E-04	768	1.81E-05
434	1.13E-04	501	4.14E-04	568	8.21E-04	635	7.44E-04	702	1.30E-04	769	1.75E-05
435	1.25E-04	502	4.25E-04	569	8.30E-04	636	7.30E-04	703	1.25E-04	770	1.73E-05
436	1.39E-04	503	4.36E-04	570	8.38E-04	637	7.17E-04	704	1.21E-04	771	1.68E-05
437	1.56E-04	504	4.46E-04	571	8.46E-04	638	7.03E-04	705	1.17E-04	772	1.63E-05
438	1.74E-04	505	4.54E-04	572	8.53E-04	639	6.92E-04	706	1.14E-04	773	1.61E-05
439	1.94E-04	506	4.64E-04	573	8.59E-04	640	6.80E-04	707	1.10E-04	774	1.58E-05
440	2.17E-04	507	4.74E-04	574	8.71E-04	641	6.65E-04	708	1.06E-04	775	1.52E-05
441	2.44E-04	508	4.84E-04	575	8.76E-04	642	6.54E-04	709	1.03E-04	776	1.50E-05
442	2.77E-04	509	4.90E-04	576	8.84E-04	643	6.41E-04	710	9.96E-05	777	1.50E-05
443	3.13E-04	510	4.98E-04	577	8.88E-04	644	6.31E-04	711	9.63E-05	778	1.46E-05
444	3.48E-04	511	5.05E-04	578	8.98E-04	645	6.17E-04	712	9.39E-05	779	1.48E-05
445	4.02E-04	512	5.14E-04	579	9.01E-04	646	6.07E-04	713	9.08E-05	780	1.48E-05
446	4.58E-04	513	5.17E-04	580	9.09E-04	647	5.94E-04	714	8.82E-05	N/A	N/A

4.0 LM-79 Measurement and Test Results

4.2 Goniophotometer Test

Model No.	STRP2H @10W3500K	Sample ID	241225004-S1
Operate time (Min.)	30	Stabilization time (Min.)	60
Temperature (°C)	24.7	Humidity (%RH)	41.3

Test Method
<p>The Samples were tested according to the ANSI/IES LM-79:2019.</p> <p>Photometric parameters were measured using a type C goniophotometer and software.</p> <p>The ambient temperature shall be maintained at $25 \pm 1^\circ\text{C}$, measured at a point not more than 1 m from the sample and at the same height as the sample.</p> <p>The voltage of an AC power supply (RMS voltage) or DC power supply (instantaneous voltage) applied to the device under test shall be regulated to within ± 0.2 percent under load.</p> <p>The samples were operated at rated voltage and was stabilized before measurement. Luminous flux, luminaire efficacy, zonal lumen were calculated from the software taken at 1.0° vertical intervals and 15° horizontal intervals.</p>

Test Conditions

Condition	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor
WORST CASE	277.0	60	0.044	10.3	0.847
NON-WORST CASE	120.0	60	0.081	9.6	0.983

Test Result

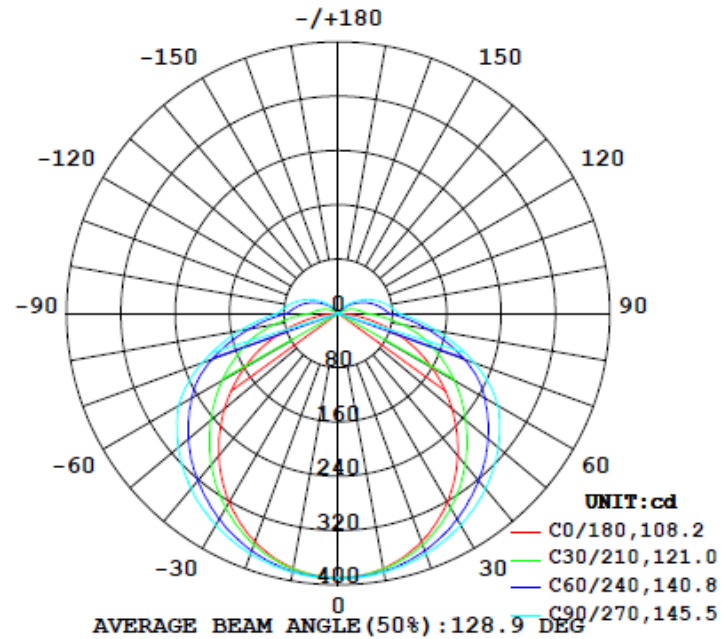
Flux (lm)	Flux per feet (lm/ft)	Field Angle (10%)		Beam Angle (50%)		Luminous Efficacy (lm/W)
		C0-180	C90-270	C0-180	C90-270	
1514	757	161.3	161.3	108.3	145.3	147.0

Zonal Lumen Requirement (0°-60°)	UGR	
	Crosswise	Endwise
62.7%	21.3	26.7

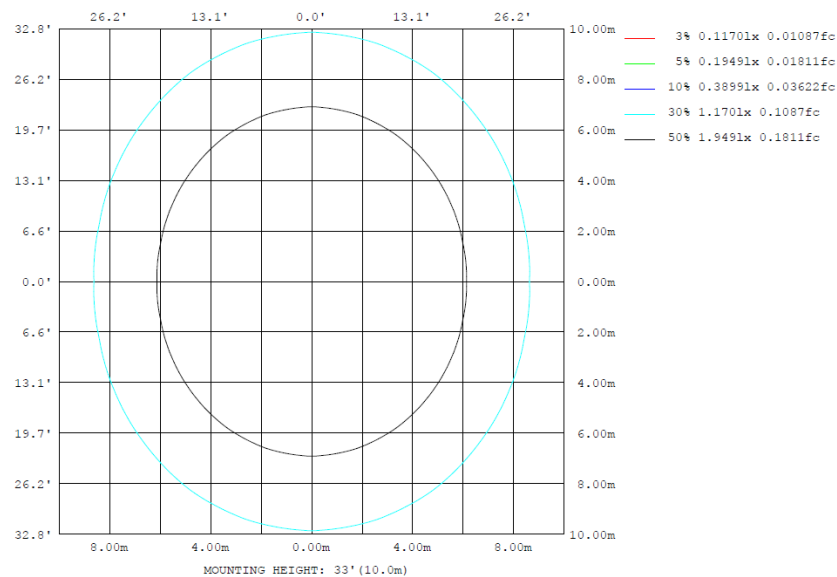
4.2 Goniophotometer Test

Lighting Distribution Curve

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



Isolux Plot



4.2 Goniophotometer Test

Zonal Lumen Summary

ZONAL FLUX DIAGRAM:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	± zone	± total	%lum, lamp
10	381.6	383.5	386.9	383.5	381.6	383.5	386.9	383.5	0- 10	36.95	36.95	2.44, 2.44
20	357.9	366.5	377.5	366.5	357.9	366.5	377.5	366.5	10- 20	106.5	143.5	9.48, 9.48
30	321.3	340.5	360.3	340.5	321.3	340.5	360.3	340.5	20- 30	163.8	307.3	20.3, 20.3
40	273.9	305.2	337.1	305.2	273.9	305.2	337.1	305.2	30- 40	202.9	510.2	33.7, 33.7
50	218.8	266.8	307.5	266.8	218.8	266.8	307.5	266.8	40- 50	221.0	731.2	48.3, 48.3
60	159.2	224.3	271.0	224.3	159.2	224.3	271.0	224.3	50- 60	217.7	948.8	62.7, 62.7
70	97.30	178.2	213.5	178.2	97.30	178.2	213.5	178.2	60- 70	193.2	1142	75.4, 75.4
80	38.03	117.2	147.2	117.2	38.03	117.2	147.2	117.2	70- 80	145.8	1288	85, 85
90	3.095	60.32	89.35	60.32	3.095	60.32	89.35	60.32	80- 90	87.06	1375	90.8, 90.8
100	2.708	46.92	73.55	46.92	2.708	46.92	73.55	46.92	90-100	52.85	1428	94.3, 94.3
110	2.801	33.23	57.00	33.23	2.801	33.23	57.00	33.23	100-110	38.80	1466	96.9, 96.9
120	2.801	20.21	39.73	20.21	2.801	20.21	39.73	20.21	110-120	25.15	1492	98.5, 98.5
130	2.801	8.564	23.50	8.564	2.801	8.564	23.50	8.564	120-130	13.73	1505	99.4, 99.4
140	2.894	2.203	9.100	2.203	2.894	2.203	9.100	2.203	130-140	5.722	1511	99.8, 99.8
150	3.081	1.836	1.016	1.836	3.081	1.836	1.016	1.836	140-150	1.639	1513	99.9, 99.9
160	2.894	1.560	0.9238	1.560	2.894	1.560	0.9238	1.560	150-160	0.8242	1514	100, 100
170	2.990	1.469	1.109	1.469	2.990	1.469	1.109	1.469	160-170	0.4650	1514	100, 100
180	3.081	1.469	1.201	1.469	3.081	1.469	1.201	1.469	170-180	0.1656	1514	100, 100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

	Zonal (lm)		Total (lm)	Percent
0-10	36.95	0-10	36.95	2.44%
10-20	106.53	0-20	143.48	9.48%
20-30	163.80	0-30	307.28	20.30%
30-40	202.90	0-40	510.18	33.70%
40-50	220.98	0-50	731.16	48.29%
50-60	217.67	0-60	948.83	62.67%
60-70	193.16	0-70	1141.99	75.43%
70-80	145.75	0-80	1287.74	85.06%
80-90	87.06	0-90	1374.80	90.81%
90-100	52.85	0-100	1427.65	94.30%
100-110	38.80	0-110	1466.45	96.86%
110-120	25.15	0-120	1491.60	98.52%
120-130	13.73	0-130	1505.33	99.43%
130-140	5.72	0-140	1511.05	99.81%
140-150	1.64	0-150	1512.69	99.92%
150-160	0.82	0-160	1513.51	99.97%
160-170	0.46	0-170	1513.97	100.00%
170-180	0.17	0-180	1514.14	100.01%

4.2 Goniophotometer Test

UGR – Uncorrected Table:

UGR TABLE - UNCORRECTED

Reflectances											
Ceiling Cavity	70	70	50	50	30	70	70	50	50	30	
Walls	50	30	50	30	30	50	30	50	30	30	
Floor Cavity	20	20	20	20	20	20	20	20	20	20	
Room Size											
X=2H	Y=2H	UGR Viewed Crosswise					UGR Viewed Endwise				
	3H	15.4	17.0	15.9	17.5	18.0	18.6	20.1	19.1	20.6	21.1
	4H	17.0	18.4	17.5	18.9	19.5	21.2	22.6	21.7	23.1	23.7
	6H	17.5	18.9	18.1	19.4	20.0	22.4	23.7	22.9	24.3	24.8
	8H	17.9	19.1	18.4	19.6	20.2	23.6	24.8	24.1	25.3	25.9
	12H	17.9	19.1	18.5	19.7	20.3	24.1	25.3	24.7	25.9	26.5
	12H	18.0	19.1	18.5	19.7	20.3	24.7	25.9	25.3	26.4	27.1
4H	2H	16.7	18.0	17.2	18.6	19.1	19.0	20.4	19.6	20.9	21.5
	3H	18.6	19.7	19.1	20.3	20.9	21.9	23.1	22.5	23.6	24.2
	4H	19.3	20.3	19.9	20.9	21.5	23.3	24.3	23.8	24.9	25.5
	6H	19.8	20.7	20.4	21.3	21.9	24.6	25.6	25.2	26.2	26.8
	8H	19.9	20.8	20.5	21.4	22.0	25.3	26.2	25.9	26.8	27.4
	12H	20.0	20.8	20.6	21.4	22.0	26.0	26.8	26.6	27.4	28.1
8H	4H	20.2	21.1	20.8	21.7	22.3	23.5	24.4	24.1	25.0	25.7
	6H	20.9	21.7	21.6	22.3	23.0	25.1	25.8	25.7	26.4	27.1
	8H	21.2	21.9	21.8	22.5	23.2	25.9	26.5	26.5	27.2	27.8
	12H	21.4	22.0	22.0	22.6	23.3	26.7	27.3	27.4	28.0	28.7
12H	4H	20.4	21.2	21.0	21.9	22.5	23.5	24.3	24.1	25.0	25.6
	6H	21.3	22.0	21.9	22.6	23.3	25.1	25.8	25.8	26.4	27.1
	8H	21.7	22.3	22.3	22.9	23.6	26.0	26.6	26.6	27.2	27.9

Maximum UGR = 28.7

UGR – Corrected Table:

UGR TABLE - CORRECTED

Reflectances											
Ceiling Cavity	70	70	50	50	30	70	70	50	50	30	
Walls	50	30	50	30	30	50	30	50	30	30	
Floor Cavity	20	20	20	20	20	20	20	20	20	20	
Room Size											
X=2H	Y=2H	UGR Viewed Crosswise					UGR Viewed Endwise				
	3H	16.8	18.4	17.3	18.9	19.4	20.0	21.5	20.5	22.0	22.5
	4H	18.4	19.8	18.9	20.3	20.9	22.6	24.0	23.1	24.5	25.1
	6H	18.9	20.3	19.5	20.8	21.4	23.8	25.1	24.3	25.7	26.2
	8H	19.3	20.5	19.8	21.0	21.6	25.0	26.2	25.5	26.7	27.3
	12H	19.3	20.5	19.9	21.1	21.7	25.5	26.7	26.1	27.3	27.9
	12H	19.4	20.5	19.9	21.1	21.7	26.1	27.3	26.7	27.8	28.5
4H	2H	18.1	19.4	18.6	20.0	20.5	20.4	21.8	21.0	22.3	22.9
	3H	20.0	21.1	20.5	21.7	22.3	23.3	24.5	23.9	25.0	25.6
	4H	20.7	21.7	21.3	22.3	22.9	24.7	25.7	25.2	26.3	26.9
	6H	21.2	22.1	21.8	22.7	23.3	26.0	27.0	26.6	27.6	28.2
	8H	21.3	22.2	21.9	22.8	23.4	26.7	27.6	27.3	28.2	28.8
	12H	21.4	22.2	22.0	22.8	23.4	27.4	28.2	28.0	28.8	29.5
8H	4H	21.6	22.5	22.2	23.1	23.7	24.9	25.8	25.5	26.4	27.1
	6H	22.3	23.1	23.0	23.7	24.4	26.5	27.2	27.1	27.8	28.5
	8H	22.6	23.3	23.2	23.9	24.6	27.3	27.9	27.9	28.6	29.2
	12H	22.8	23.4	23.4	24.0	24.7	28.1	28.7	28.8	29.4	30.1
12H	4H	21.8	22.6	22.4	23.3	23.9	24.9	25.7	25.5	26.4	27.0
	6H	22.7	23.4	23.3	24.0	24.7	26.5	27.2	27.2	27.8	28.5
	8H	23.1	23.7	23.7	24.3	25.0	27.4	28.0	28.0	28.6	29.3

Maximum UGR = 30.1

4.2 Goniophotometer Test

Luminous Distribution Intensity Data

Table--1

UNIT: cd

C (DEG)	0	15	30	45	60	75	90	105	120	135	150	165	180	195	210	225	240	255	270
γ (DEG)	390	390	390	389	390	390	390	390	390	389	390	390	390	390	390	389	390	390	390
5	388	389	388	388	389	390	390	390	389	388	388	389	388	389	388	388	389	390	390
10	382	382	382	383	386	387	387	386	383	382	382	382	382	382	382	383	386	387	387
15	372	373	374	377	380	382	383	382	380	377	374	373	372	373	374	377	380	382	383
20	358	360	363	367	372	376	378	376	372	367	363	360	358	360	363	367	372	376	378
25	342	343	348	355	362	367	369	367	362	355	348	343	342	343	348	355	362	367	369
30	321	323	331	341	350	357	360	357	350	341	331	323	321	323	331	341	350	357	360
35	298	302	312	324	336	346	350	346	336	324	312	302	298	302	312	324	336	346	350
40	274	278	291	305	322	333	337	333	322	305	291	278	274	278	291	305	322	333	337
45	247	253	269	287	306	318	323	318	306	287	269	253	247	253	269	287	306	318	323
50	219	226	245	267	288	302	307	302	288	267	245	226	219	226	245	267	288	302	307
55	189	199	221	246	269	285	290	285	269	246	221	199	189	199	221	246	269	285	290
60	159	171	197	224	249	266	271	266	249	224	197	171	159	171	197	224	249	266	271
65	128	143	173	203	227	240	245	240	227	203	173	143	128	143	173	203	227	240	245
70	97.3	116	149	178	198	209	213	209	198	178	149	116	97.3	116	149	178	198	209	213
75	66.7	90.1	125	149	165	176	180	176	165	149	125	90.1	66.7	90.1	125	149	165	176	180
80	38.0	65.2	96.3	117	133	144	147	144	133	117	96.3	65.2	38.0	65.2	96.3	117	133	144	147
85	14.6	41.3	66.8	87.1	103	112	116	112	103	87.1	66.8	41.3	14.6	41.3	66.8	87.1	103	112	116
90	3.10	19.7	41.3	60.3	75.9	85.8	89.3	85.8	75.9	60.3	41.3	19.7	3.10	19.7	41.3	60.3	75.9	85.8	89.3
95	2.89	14.6	34.8	53.1	68.1	77.4	81.2	77.4	68.1	53.1	34.8	14.6	2.89	14.6	34.8	53.1	68.1	77.4	81.2
100	2.71	10.1	29.2	46.9	60.9	69.8	73.6	69.8	60.9	46.9	29.2	10.1	2.71	10.1	29.2	46.9	60.9	69.8	73.6
105	2.71	6.32	23.3	40.2	53.8	62.1	65.6	62.1	53.8	40.2	23.3	6.32	2.71	6.32	23.3	40.2	53.8	62.1	65.6
110	2.80	3.35	17.7	33.2	46.1	54.0	57.0	54.0	46.1	33.2	17.7	3.35	2.80	3.35	17.7	33.2	46.1	54.0	57.0
115	2.80	2.88	12.7	26.7	38.1	45.5	48.3	45.5	38.1	26.7	12.7	2.88	2.80	2.88	12.7	26.7	38.1	45.5	48.3
120	2.80	2.79	7.94	20.2	30.7	37.0	39.7	37.0	30.7	20.2	7.94	2.79	2.80	2.79	7.94	20.2	30.7	37.0	39.7
125	2.80	2.69	3.78	14.2	23.4	29.4	31.4	29.4	23.4	14.2	3.78	2.69	2.80	2.69	3.78	14.2	23.4	29.4	31.4
130	2.80	2.69	2.67	8.56	16.4	21.8	23.5	21.8	16.4	8.56	2.67	2.69	2.80	2.69	2.67	8.56	16.4	21.8	23.5
135	2.80	2.79	2.49	3.61	10.1	14.5	16.1	14.5	10.1	3.61	2.49	2.79	2.80	2.79	2.49	3.61	10.1	14.5	16.1
140	2.89	2.88	2.40	2.20	4.07	7.85	9.10	7.85	4.07	2.20	2.40	2.88	2.89	2.88	2.40	2.20	4.07	7.85	9.10
145	2.99	2.69	2.40	1.93	1.66	1.95	2.77	1.95	1.66	1.93	2.40	2.69	2.99	2.69	2.40	1.93	1.66	1.95	2.77
150	3.08	2.60	2.12	1.84	1.57	1.29	1.02	1.29	1.57	1.84	2.12	2.60	3.08	2.60	2.12	1.84	1.57	1.29	1.02
155	3.08	2.42	1.94	1.65	1.38	1.20	0.92	1.20	1.38	1.65	1.94	2.42	3.08	2.42	1.94	1.65	1.38	1.20	0.92
160	2.89	2.23	1.66	1.56	1.29	1.20	0.92	1.20	1.29	1.56	1.66	2.23	2.89	2.23	1.66	1.56	1.29	1.20	0.92
165	2.89	2.23	1.66	1.47	1.29	1.20	1.02	1.20	1.29	1.47	1.66	2.23	2.89	2.23	1.66	1.47	1.29	1.20	1.02
170	2.99	2.41	1.66	1.47	1.29	1.20	1.11	1.20	1.29	1.47	1.66	2.41	2.99	2.41	1.66	1.47	1.29	1.20	1.11
175	3.08	2.69	1.66	1.47	1.29	1.20	1.20	1.20	1.29	1.47	1.66	2.69	3.08	2.69	1.66	1.47	1.29	1.20	1.20
180	3.08	2.69	1.66	1.47	1.29	1.20	1.20	1.20	1.29	1.47	1.66	2.69	3.08	2.69	1.66	1.47	1.29	1.20	1.20

Table--2

UNIT: cd

C (DEG)	285	300	315	330	345														
γ (DEG)	390	390	389	390	390														
5	390	389	388	388	389														
10	387	386	383	382	382														
15	382	380	377	374	373														
20	376	372	367	363	360														
25	367	362	355	348	343														
30	357	350	341	331	323														
35	346	336	324	312	302														
40	333	322	305	291	278														
45	318	306	287	269	253														
50	302	288	267	245	226														
55	285	269	246	221	199														
60	266	249	224	197	171														
65	240	227	203	173	143														
70	209	198	178	149	116														
75	176	165	149	125	90.1														
80	144	133	117	96.3	65.2														
85	112	103	87.1	66.8	41.3														
90	85.8	75.9	60.3	41.3	19.7														
95	77.4	68.1	53.1	34.8	14.6														
100	69.8	60.9	46.9	29.2	10.1														
105	62.1	53.8	40.2	23.3	6.32														
110	54.0	46.1	33.2	17.7	3.35														
115	45.5	38.1	26.7	12.7	2.88														
120	37.0	30.7	20.2	7.94	2.79														
125	29.4	23.4	14.2	3.78	2.69														
130	21.8	16.4	8.56	2.67	2.69														
135	14.5	10.1	3.61	2.49	2.79														
140	7.85	4.07	2.20	2.40	2.88														
145	1.95	1.66	1.93	2.40	2.69														
150	1.29	1.57	1.84	2.12	2.60														
155	1.20	1.38	1.65	1.94	2.42														
160	1.20	1.29	1.56	1.66	2.23														
165	1.20	1.29	1.47	1.66	2.23														
170	1.20	1.29	1.47	1.66	2.41														
175	1.20	1.29	1.47	1.66	2.69														
180	1.20	1.29	1.47	1.66	2.69														

4.0 LM-79 Measurement and Test Results

4.3 THD and PF Test

Model No.	STRP2H @10W3500K	Sample ID	241225004-S1
Temperature (°C)	25.4	Humidity (%RH)	41.0

Test Method
<p>The samples were tested according to the and ANSI C82.77: 2002 and ANSI C82.77-10:2020</p> <p>The total harmonic distortion shall be measured to the 40th order.</p> <p>The ambient temperature shall be maintained at $25 \pm 1^{\circ}\text{C}$. The sample measurements were made using a digital power meter and power supply. The sample was operated at rated voltage and was stabilized before measurement. The total harmonic distortion was calculated.</p>

Test Results

Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	iTHD(%)
120.0	60	0.081	9.6	0.983	8.73
277.0	60	0.044	10.3	0.847	21.77

5.0 Equipment List:

Equipment ID	Equipment Name	Last Cal.	Due Cal.
NTC-F01-001	Goniophotometer System	2024-11-07	2025-11-06
NTC-F01-006	2.0 meter Integrating Sphere	2024-11-07	2025-11-06
NTC-F01-012	Standard Lamp	2024-10-28	2025-10-27
NTC-F01-013	Standard Lamp	2024-10-28	2025-10-27
NTC-F01-031	Digital Power Meter	2024-08-06	2025-08-05
NTC-F01-019	Temperature & Humidity Meter	2024-10-29	2025-10-28

*****End of Report*****