

PHONE: (303) 442-1255 • FAX: (970) 535-3114 • E-MAIL: itl@itlboulder.com • WEBSITE: www.itlboulder.com

REPORT NUMBER: ITL87609-GONIOPHOTOMETRY

PAGE: 1 OF 9

ISSUE DATE: 06/20/16

PREPARED FOR: RAB LIGHTING INC.

CATALOG NUMBER: FSLEDH3YYB/120 - FSLEDH3YYB/120/TL

LUMINAIRE: CAST BLACK PAINTED METAL HOUSING/FACEPLATE, CAST BLACK PAINTED METAL CIRCUIT BOARD MOUNTING BASE WITH UNFINISHED CIRCUIT BOARD MOUNTING SURFACE, 1 WHITE CIRCUIT BOARD WITH 3 LEDS, CLEAR FLAT GLASS LENS.

LAMPS: THREE WHITE MULTI-CHIP LIGHT EMITTING DIODES (LEDs), VERTICAL BASE-UP POSITION.

INPUT ELECTRICAL: 120.0 VOLTS, 3.01 WATTS, 0.0264 AMPS

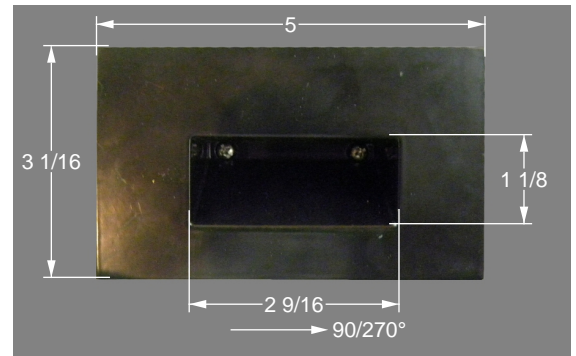
MOUNTING: RECESSED WALL

LED DRIVER: INTEGRAL TO CIRCUIT BOARD

NOTE: DATA SHOWN IS ABSOLUTE FOR THE SAMPLE PROVIDED AT RATED INPUT VOLTAGE (120VAC, 60Hz) TO THE LUMINAIRE.

TEST PROCEDURE: IESNA LM-79-08

TEST DISTANCE = 20.0 FEET



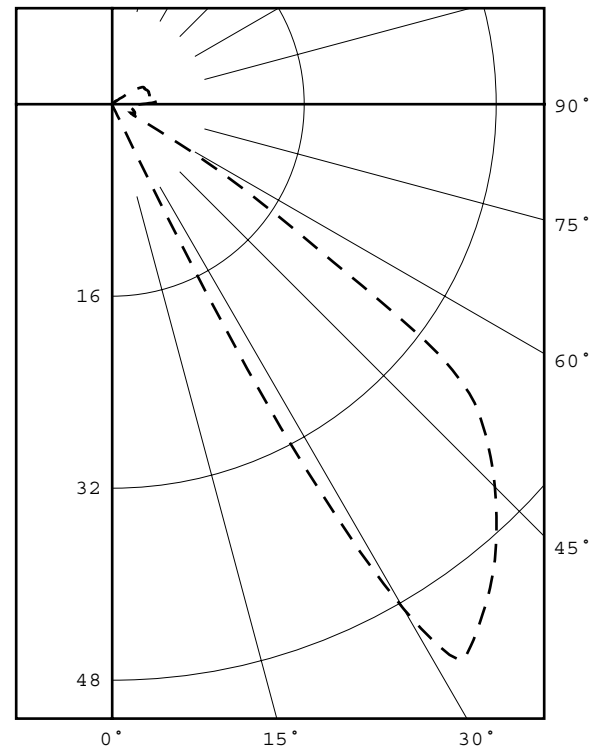
CANDELA DISTRIBUTION

FLUX

	0.0	45.0	90.0	135.0	180.0	
0	0.0	0.0	0.0	0.0	0.0	
5	0.0	0.0	0.0	0.0	0.0	0.0
15	0.0	0.0	0.0	0.0	0.0	0.0
25	1.5	0.1	0.0	0.0	0.0	0.8
35	53.2	10.3	0.0	0.0	0.0	7.3
45	45.1	44.8	0.0	0.0	0.0	10.7
55	20.2	34.6	0.0	0.0	0.0	8.8
65	1.7	11.6	0.0	0.0	0.0	2.7
75	1.8	0.5	0.0	0.0	0.0	0.6
85	1.5	0.4	0.0	0.0	0.0	0.4
90	2.4	0.6	0.0	0.0	0.0	
95	3.9	0.6	0.0	0.0	0.0	0.9
105	3.2	0.5	0.0	0.0	0.0	0.8
115	3.0	0.3	0.0	0.0	0.0	0.6
125	1.1	0.1	0.0	0.0	0.0	0.2
135	0.2	0.1	0.0	0.0	0.0	0.0
145	0.1	0.0	0.0	0.0	0.0	0.0
155	0.0	0.0	0.0	0.0	0.0	0.0
165	0.0	0.0	0.0	0.0	0.0	0.0
175	0.0	0.0	0.0	0.0	0.0	0.0
180	0.0	0.0	0.0	0.0	0.0	0.0

ZONAL LUMEN SUMMARY

ZONE	LUMENS	%FIXT
0- 30	0.8	2.5
0- 40	8.1	24.1
0- 60	27.6	81.7
0- 90	31.3	92.7
90-120	2.2	6.6
90-130	2.4	7.1
90-150	2.5	7.3
90-180	2.5	7.3
0-180	33.8	100.0



LEGEND:
0-deg -----
90-deg =====
180-deg -----

EFFICACY = 11.2 lm/W

CIE TYPE - DIRECT

PLANE : 0-DEG 90-DEG

BEAM ANGLE (50%) : 26.5 X N/A DEGREES

FIELD ANGLE (10%) : 34.6 X N/A DEGREES

Checked B. HYRE
Approved R. BEATTIE
Lighting Engineer



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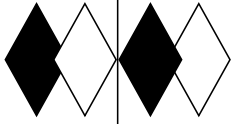
INDEPENDENT TESTING LABORATORIES, INC.
 4066 CAMELOT CIRCLE, LONGMONT, CO 80504 USA

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LUMINANCE DATA IN CANDELA/SQ M			
ANGLE IN DEG	AVERAGE 0-DEG	AVERAGE 45-DEG	AVERAGE 90-DEG
45	34953.	49600.	0.
55	13046.	31547.	0.
65	1013.	9989.	0.
75	996.	388.	0.
85	802.	310.	0.



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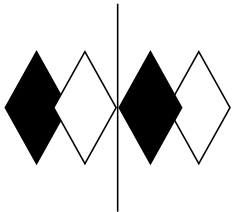
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CANDELA DISTRIBUTION
 LATERAL ANGLE

	0.0	5.0	15.0	25.0	35.0	45.0	55.0	65.0	75.0	85.0	90.0	112.5	135.0	157.5
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17.5	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20.0	0.3	0.3	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22.5	0.5	0.5	0.4	0.3	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25.0	1.5	1.5	0.7	0.6	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27.5	30.4	30.0	15.4	2.3	0.6	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30.0	48.6	48.2	40.7	31.7	2.2	0.5	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
32.5	54.7	55.0	54.4	47.6	28.5	0.8	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
35.0	53.2	53.4	53.4	53.5	43.6	10.3	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0
37.5	51.5	51.7	51.7	51.8	51.2	33.7	0.6	0.1	0.0	0.0	0.0	0.0	0.0	0.0
40.0	49.6	49.7	49.7	49.9	49.5	45.9	3.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0
42.5	47.4	47.6	47.6	47.8	47.5	46.9	17.4	0.2	0.0	0.0	0.0	0.0	0.0	0.0
45.0	45.1	45.3	45.3	45.5	45.3	44.8	26.6	0.3	0.0	0.0	0.0	0.0	0.0	0.0
47.5	42.6	42.9	42.9	43.1	42.9	42.5	32.6	0.5	0.0	0.0	0.0	0.0	0.0	0.0
50.0	39.8	40.1	40.3	40.5	40.4	40.0	31.0	3.1	0.0	0.0	0.0	0.0	0.0	0.0
52.5	34.5	35.2	36.7	37.6	37.7	37.4	29.1	5.0	0.1	0.0	0.0	0.0	0.0	0.0
55.0	20.2	21.2	26.4	33.8	34.8	34.6	26.9	5.0	0.1	0.0	0.0	0.0	0.0	0.0
57.5	12.0	12.3	13.7	21.7	30.8	31.8	24.7	4.8	0.1	0.0	0.0	0.0	0.0	0.0
60.0	5.4	6.0	8.2	11.7	20.1	28.5	22.3	4.4	0.1	0.0	0.0	0.0	0.0	0.0
62.5	2.0	2.0	2.3	5.8	10.3	23.0	19.9	4.0	0.1	0.0	0.0	0.0	0.0	0.0
65.0	1.7	1.7	1.7	1.8	4.7	11.6	17.4	3.5	0.2	0.0	0.0	0.0	0.0	0.0
67.5	2.0	2.0	1.9	1.6	1.3	5.8	13.3	3.0	0.3	0.0	0.0	0.0	0.0	0.0
70.0	2.0	2.0	2.0	1.9	1.2	1.1	6.4	2.4	0.3	0.0	0.0	0.0	0.0	0.0
72.5	1.9	1.9	1.9	1.9	1.3	0.5	2.6	1.8	0.3	0.0	0.0	0.0	0.0	0.0
75.0	1.8	1.8	1.8	1.7	1.1	0.5	0.4	0.4	0.2	0.0	0.0	0.0	0.0	0.0
77.5	1.7	1.7	1.7	1.6	1.0	0.4	0.4	0.3	0.1	0.0	0.0	0.0	0.0	0.0
80.0	1.5	1.5	1.6	1.5	0.9	0.4	0.3	0.2	0.1	0.0	0.0	0.0	0.0	0.0
82.5	1.4	1.4	1.5	1.3	0.9	0.4	0.3	0.2	0.1	0.0	0.0	0.0	0.0	0.0
85.0	1.5	1.5	1.5	1.4	0.9	0.4	0.3	0.2	0.1	0.0	0.0	0.0	0.0	0.0
87.5	1.8	1.8	1.7	1.6	1.3	0.5	0.3	0.2	0.1	0.0	0.0	0.0	0.0	0.0
90.0	2.4	2.4	2.5	2.5	1.9	0.6	0.3	0.2	0.1	0.0	0.0	0.0	0.0	0.0
92.5	3.5	3.4	3.6	3.9	3.0	0.6	0.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0
95.0	3.9	3.9	4.0	4.2	3.1	0.6	0.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0
97.5	3.8	3.7	3.9	3.9	2.8	0.6	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0
100.0	3.3	3.3	3.5	3.5	2.5	0.6	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0
102.5	3.2	3.2	3.4	3.3	2.4	0.6	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0
105.0	3.2	3.2	3.3	3.2	2.4	0.5	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0
107.5	3.2	3.2	3.2	3.1	2.2	0.5	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
110.0	3.2	3.1	3.1	3.1	2.1	0.5	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
112.5	3.1	3.1	3.0	3.0	2.0	0.4	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
115.0	3.0	3.0	3.0	2.8	1.9	0.3	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
117.5	3.0	2.9	2.8	2.6	1.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
120.0	2.8	2.7	2.4	1.9	0.6	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
122.5	2.1	2.1	1.6	0.9	0.3	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
125.0	1.1	1.0	0.7	0.4	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
127.5	0.5	0.5	0.4	0.3	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
130.0	0.4	0.4	0.3	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
132.5	0.3	0.2	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
135.0	0.2	0.2	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
137.5	0.2	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
140.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
142.5	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
145.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
147.5	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
150.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
152.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
155.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
157.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION
 LATERAL ANGLE

	0.0	5.0	15.0	25.0	35.0	45.0	55.0	65.0	75.0	85.0	90.0	112.5	135.0	157.5
160.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
162.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION
LATERAL ANGLE

	180.0
0.0	0.0
2.5	0.0
5.0	0.0
7.5	0.0
10.0	0.0
12.5	0.0
15.0	0.0
17.5	0.0
20.0	0.0
22.5	0.0
25.0	0.0
27.5	0.0
30.0	0.0
32.5	0.0
35.0	0.0
37.5	0.0
40.0	0.0
42.5	0.0
45.0	0.0
47.5	0.0
50.0	0.0
52.5	0.0
55.0	0.0
57.5	0.0
60.0	0.0
62.5	0.0
65.0	0.0
67.5	0.0
70.0	0.0
72.5	0.0
75.0	0.0
77.5	0.0
80.0	0.0
82.5	0.0
85.0	0.0
87.5	0.0
90.0	0.0
92.5	0.0
95.0	0.0
97.5	0.0
100.0	0.0
102.5	0.0
105.0	0.0
107.5	0.0
110.0	0.0
112.5	0.0
115.0	0.0
117.5	0.0
120.0	0.0
122.5	0.0
125.0	0.0
127.5	0.0
130.0	0.0
132.5	0.0
135.0	0.0
137.5	0.0
140.0	0.0
142.5	0.0
145.0	0.0
147.5	0.0
150.0	0.0
152.5	0.0
155.0	0.0
157.5	0.0



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CANDELA DISTRIBUTION
LATERAL ANGLE

	180.0
160.0	0.0
162.5	0.0
165.0	0.0
167.5	0.0
170.0	0.0
172.5	0.0
175.0	0.0
177.5	0.0
180.0	0.0



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5-DEGREE
ZONAL LUMEN SUMMARY

0- 5	0.0
5- 10	0.0
10- 15	0.0
15- 20	0.0
20- 25	0.0
25- 30	0.8
30- 35	2.9
35- 40	4.4
40- 45	5.2
45- 50	5.5
50- 55	5.2
55- 60	3.6
60- 65	1.9
65- 70	0.8
70- 75	0.4
75- 80	0.2
80- 85	0.2
85- 90	0.2
90- 95	0.4
95-100	0.5
100-105	0.4
105-110	0.4
110-115	0.3
115-120	0.3
120-125	0.1
125-130	0.0
130-135	0.0
135-140	0.0
140-145	0.0
145-150	0.0
150-155	0.0
155-160	0.0
160-165	0.0
165-170	0.0
170-175	0.0
175-180	0.0

10-DEGREE
ZONAL LUMEN SUMMARY

0- 10	0.0
0- 20	0.0
0- 30	0.8
0- 40	8.1
0- 50	18.8
0- 60	27.6
0- 70	30.3
0- 80	30.9
0- 90	31.3
0-100	32.2
0-110	33.0
0-120	33.6
0-130	33.7
0-140	33.8
0-150	33.8
0-160	33.8
0-170	33.8
0-180	33.8



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REPORT NUMBER: ITL87609-GONIOPHOTOMETRY

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ISSUE DATE: 06/20/16

PREPARED FOR: RAB LIGHTING INC.

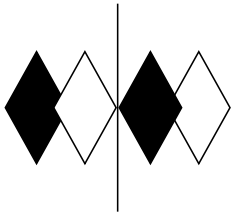
COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

EFFECTIVE FLOOR CAVITY REFLECTANCE 0.20

RC	80				70				50			30			10			0	
	RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	117	117	117	117	117	114	114	114	114	107	107	107	101	101	101	95	95	95	93
1	107	103	98	95	95	104	100	96	92	94	91	88	89	86	84	84	82	80	78
2	97	89	82	76	76	94	86	80	74	81	76	71	77	73	69	73	69	66	64
3	87	76	68	61	61	84	74	66	60	70	63	58	66	61	56	63	58	54	52
4	78	66	56	49	49	75	64	55	48	60	53	47	57	51	46	54	49	44	42
5	71	57	47	40	40	68	55	46	39	52	44	38	49	43	37	47	41	36	34
6	64	49	40	33	33	61	48	39	32	45	37	31	43	36	31	41	35	30	27
7	58	43	34	27	27	56	42	33	27	40	32	26	38	31	25	36	29	24	22
8	53	38	29	22	22	51	37	28	22	35	27	22	33	26	21	31	25	20	18
9	48	34	25	19	19	47	33	24	18	31	23	18	29	22	17	28	22	17	15
10	45	30	22	16	16	43	29	21	16	28	20	15	26	19	15	25	19	14	12

ALL CANDELA, LUMENS, LUMINANCE, AND VCP VALUES IN THIS REPORT ARE BASED ON ABSOLUTE PHOTOMETRY. THE COEFFICIENT OF UTILIZATION VALUES ARE BASED ON THE TOTAL ABSOLUTE LUMEN OUTPUT OF THIS TEST SAMPLE.

NOTE: THE ZONAL CAVITY CALCULATION TECHNIQUE IS ACCURATE WHEN LUMINAIRES WITH SYMMETRIC CANDELA DISTRIBUTIONS ARE EMPLOYED AND WHEN THE LUMINAIRES ARE LOCATED SYMMETRICALLY THROUGHOUT THE ROOM. THIS UNIT HAS SPECIAL CHARACTERISTICS AND THEREFORE THESE COEFFICIENTS SHOULD BE USED WITH CAUTION.



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NVLAP LAB CODE: 200925-0

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PAGE: 9 OF 9

ADDRESS: 170 LUDLOW AVE.
NORTHVALE, NJ 07647

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REPORT NUMBER: ITL87609-SPHERE
DATE: 06/21/16
PREPARED FOR: RAB LIGHTING INC.
CATALOG NUMBER: FSLEDH3YYB/120 - FSLEDH3YYB/120/TL

ADDRESS: 170 LUDLOW AVE.
NORTHVALE, NJ 07647

LUMINAIRE: CAST BLACK PAINTED METAL HOUSING/FACEPLATE, CAST BLACK PAINTED METAL
CIRCUIT BOARD MOUNTING BASE WITH UNFINISHED CIRCUIT BOARD MOUNTING
SURFACE, 1 WHITE CIRCUIT BOARD WITH 3 LEDS, CLEAR FLAT GLASS LENS.

LAMP: THREE WHITE MULTI-CHIP LIGHT EMITTING DIODES (LEDs), VERTICAL
BASE-UP POSITION.

DRIVER: INTEGRAL TO CIRCUIT BOARD

NOTE: DATA SHOWN IS ABSOLUTE FOR THE SAMPLE PROVIDED AT RATED INPUT
VOLTAGE (120VAC, 60Hz) TO THE LUMINAIRE.

Calibration Due:

INSTRUMENTS: Associated Power Technologies APT5020 AC Power Source N/A
Yokogawa WT210 Digital Power Meter #4 04/07/17
Ocean Optics QE65000 Spectroradiometer 04/19/17
ITL 1.5m Diameter Integrating Sphere S15-2, 4PI Geometry 04/19/17

OBJECT OF TEST: Measure the Absolute Flux in lumens*, Spectral Power Distribution (SPD),
Correlated Color Temperature (CCT), Color Rendering Index (CRIa,1-14),
Chromaticity Coordinates (x,y; u',v'), ANSI C78.377 Duv, Total Radiant
Flux*, Scotopic / Photopic Lumen Ratio, and electrical data including
ANSI C82.77-2002 Power Factor (PF) and Total Harmonic Distortion (THD)
to the test sample.

PROCEDURE: The test sample was provided by the customer and had an unknown number
of operating hours. The test sample was mounted inside the integrating
sphere and allowed to stabilize. After stabilization occurred,
measurements were taken. In order to measure mean performance, multiple
data sets were recorded and averaged. Readings were taken with the test
sample operating at 120VAC input in a 25 +/-1 degree Celsius free
air ambient and in accordance with IESNA LM-79-08. All data are traceable
to the National Institute of Standards and Technology.

RESULTS: (continued subsequent pages)

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PRODUCT CERTIFICATION, APPROVAL, OR ENDORSEMENT BY NVLAP, NIST, OR ANY AGENCY OF THE
FEDERAL GOVERNMENT.

Checked N WHITE
Approved P O'CONNOR
Sphere Lab Supervisor



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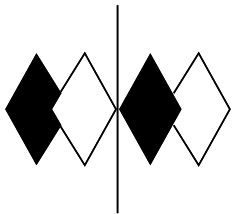
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RESULTS:

PHOTOMETRIC	
Total Integrated Flux (lumens)	33.8 *
SPECTRORADIOMETRIC	
Observer	CIE 1931 2 degree
Chromaticity Ordinate x	0.4618
Chromaticity Ordinate y	0.4199
Observer	CIE 1976 2 degree
Chromaticity Ordinate u'	0.2596
Chromaticity Ordinate v'	0.5311
Correlated Color Temp CCT (K)	2744
ANSI C78.377-2008 Duv	0.003
Total Radiant Flux (milliWatts)	101 *
Scotopic / Photopic Lumen Ratio	1.240
ELECTRICAL	
Input Voltage (Volts AC)	120.0
Input Current (Amps AC)	0.026
Input Power (Watts)	3.01
Input Power Factor (%)	96.5
Input Current THD (%)	31.5
Input Voltage THD (%)	0.3
EFFICACY (lumens/Watt)	11.2

COLOR RENDERING INDICES	CRI
Ra (Average 1-8)	79
R1 Light greyish red	76
R2 Dark greyish yellow	88
R3 Strong yellowish green	97
R4 Moderate yellowish green	77
R5 Light bluish green	77
R6 Light blue	87
R7 Light violet	81
R8 Light reddish purple	52
R9 Strong red	-7
R10 Strong yellow	74
R11 Strong green	75
R12 Strong blue	69
R13 Light yellowish pink (skin)	78
R14 Moderate olive green (leaf)	99

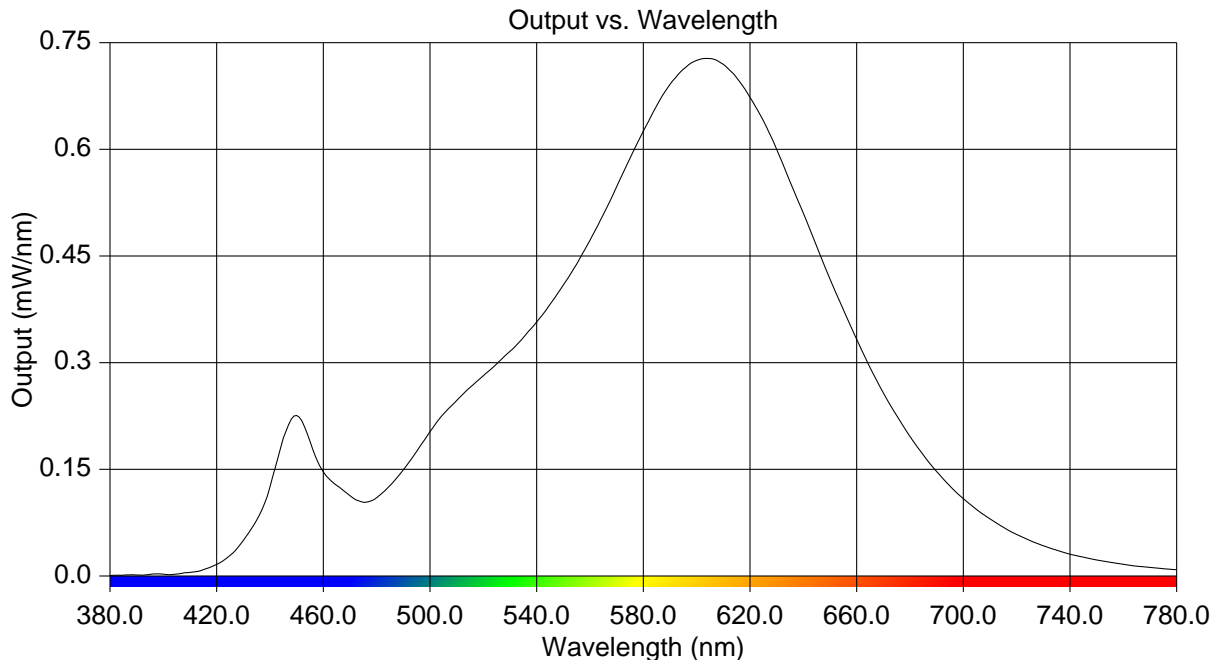
*NOTE: The total lumen output shown on this report was obtained from photometric test ITL87609-GONIOPHOTOMETRY

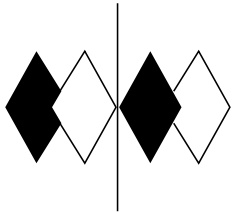


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RESULTS:

Wavelength	mW per nm	Wavelength	mW per nm	Wavelength	mW per nm
380	0.001	515	0.265	650	0.418
385	0.001	520	0.282	655	0.375
390	0.001	525	0.298	660	0.333
395	0.002	530	0.316	665	0.293
400	0.003	535	0.335	670	0.258
405	0.003	540	0.357	675	0.226
410	0.005	545	0.382	680	0.196
415	0.009	550	0.409	685	0.170
420	0.016	555	0.439	690	0.147
425	0.029	560	0.472	695	0.126
430	0.050	565	0.508	700	0.109
435	0.079	570	0.548	705	0.093
440	0.125	575	0.587	710	0.080
445	0.194	580	0.626	715	0.069
450	0.226	585	0.661	720	0.058
455	0.189	590	0.691	725	0.050
460	0.146	595	0.713	730	0.043
465	0.127	600	0.725	735	0.036
470	0.113	605	0.728	740	0.031
475	0.104	610	0.720	745	0.027
480	0.110	615	0.701	750	0.023
485	0.127	620	0.673	755	0.019
490	0.149	625	0.640	760	0.017
495	0.175	630	0.600	765	0.014
500	0.203	635	0.555	770	0.012
505	0.228	640	0.510	775	0.010
510	0.247	645	0.464	780	0.009





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CIE Chromaticity Diagram

