

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

REPORT NUMBER: ITL87593-GONIOPHOTOMETRY

PAGE: 1 OF 9

ISSUE DATE: 06/17/16

PREPARED FOR: RAB LIGHTING INC.

CATALOG NUMBER: FSLEDH3YB/120 - FSLEDH3YB/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, 3.07 WATTS, 0.0270 AMPS

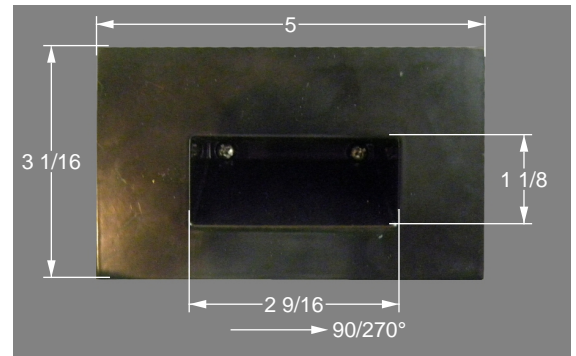
MOUNTING: RECESSED WALL

LED DRIVER: INTEGRAL TO CIRCUIT BOARD

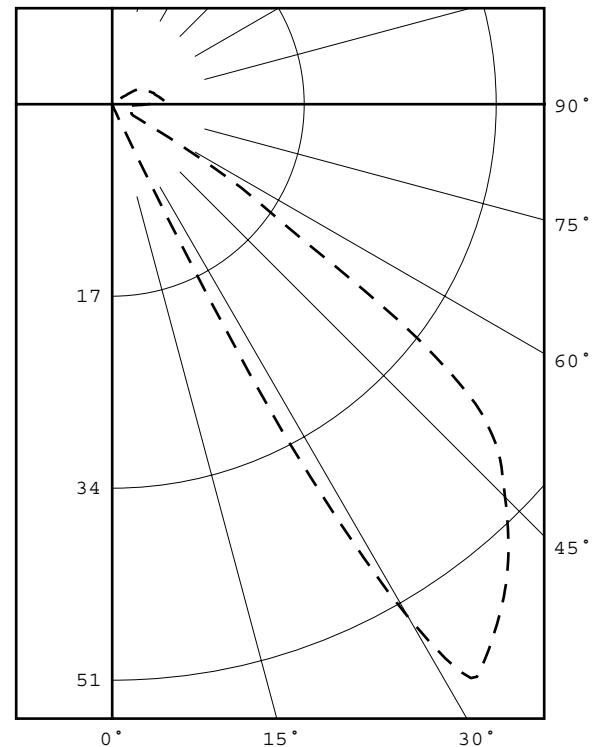
NOTE: DATA SHOWN IS ABSOLUTE FOR THE SAMPLE PROVIDED AT RATED INPUT VOLTAGE (120VAC, 60Hz) TO THE LUMINAIRE.

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	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	2.1	0.2	0.0	0.0	0.0	0.9
35	58.4	11.5	0.0	0.0	0.0	8.0
45	49.2	49.4	0.0	0.0	0.0	11.8
55	18.9	38.1	0.0	0.0	0.0	9.2
65	1.9	10.8	0.0	0.0	0.0	2.7
75	2.0	0.5	0.0	0.0	0.0	0.6
85	1.7	0.5	0.0	0.0	0.0	0.5
90	3.2	0.6	0.0	0.0	0.0	1.0
95	4.5	0.7	0.0	0.0	0.0	0.9
105	3.8	0.7	0.0	0.0	0.0	0.6
115	3.2	0.4	0.0	0.0	0.0	0.2
125	0.8	0.1	0.0	0.0	0.0	0.0
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



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

ZONAL LUMEN SUMMARY	ZONE	LUMENS	%FIXT
0- 30		0.9	2.5
0- 40		8.9	24.5
0- 60		29.9	82.1
0- 90		33.8	92.6
90-120		2.5	6.8
90-130		2.7	7.3
90-150		2.7	7.4
90-180		2.7	7.4
0-180		36.5	100.0

EFFICACY = 11.9 lm/W

CIE TYPE - DIRECT

PLANE : 0-DEG 90-DEG

BEAM ANGLE (50%) : 25.9 X N/A DEGREES

FIELD ANGLE (10%) : 34.2 X N/A DEGREES

Checked J. VILLANUEVA  
Approved R. BEATTIE  
Lighting Engineer



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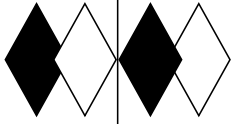
INDEPENDENT TESTING LABORATORIES, INC.  
 4066 CAMELOT CIRCLE, LONGMONT, CO 80504 USA

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

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LUMINANCE DATA IN CANDELA/SQ M			
ANGLE IN DEG	AVERAGE 0-DEG	AVERAGE 45-DEG	AVERAGE 90-DEG
45	38130.	54693.	0.
55	12206.	34738.	0.
65	1133.	9300.	0.
75	1107.	388.	0.
85	909.	388.	0.



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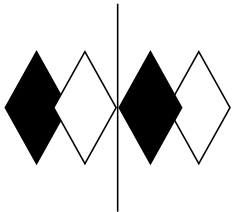
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CANDELA DISTRIBUTION  
 LATERAL ANGLE

	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	0.2	0.2	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	0.3	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22.5	0.6	0.6	0.5	0.4	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25.0	2.1	1.9	0.9	0.7	0.4	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27.5	32.8	31.8	19.0	3.1	0.7	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30.0	52.5	52.0	44.6	33.8	3.1	0.6	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
32.5	60.1	60.3	59.5	51.5	31.6	0.9	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
35.0	58.4	58.7	58.6	58.6	48.2	11.5	0.5	0.1	0.0	0.0	0.0	0.0	0.0	0.0
37.5	56.5	56.7	56.7	56.8	56.3	36.5	0.6	0.1	0.0	0.0	0.0	0.0	0.0	0.0
40.0	54.4	54.6	54.5	54.7	54.5	50.4	4.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0
42.5	51.9	52.1	52.1	52.4	52.3	51.7	19.6	0.3	0.0	0.0	0.0	0.0	0.0	0.0
45.0	49.2	49.4	49.5	49.9	49.8	49.4	29.5	0.3	0.0	0.0	0.0	0.0	0.0	0.0
47.5	46.6	46.8	46.9	47.2	47.3	46.8	35.5	0.8	0.0	0.0	0.0	0.0	0.0	0.0
50.0	42.8	43.1	43.9	44.5	44.5	44.1	33.9	4.5	0.0	0.0	0.0	0.0	0.0	0.0
52.5	34.2	34.7	38.1	41.0	41.5	41.2	31.7	5.9	0.1	0.0	0.0	0.0	0.0	0.0
55.0	18.9	19.6	24.2	33.4	38.0	38.1	29.3	5.8	0.1	0.0	0.0	0.0	0.0	0.0
57.5	12.3	12.6	14.3	19.1	32.0	34.8	26.9	5.5	0.1	0.0	0.0	0.0	0.0	0.0
60.0	4.4	4.8	7.4	11.7	18.6	30.7	24.2	5.1	0.1	0.0	0.0	0.0	0.0	0.0
62.5	2.0	2.1	2.4	4.4	10.6	22.2	21.6	4.5	0.1	0.0	0.0	0.0	0.0	0.0
65.0	1.9	1.9	1.9	1.8	3.8	10.8	18.4	3.9	0.2	0.0	0.0	0.0	0.0	0.0
67.5	2.1	2.1	2.0	1.7	1.4	5.1	12.6	3.3	0.4	0.0	0.0	0.0	0.0	0.0
70.0	2.1	2.1	2.1	2.0	1.3	1.0	6.1	2.7	0.4	0.0	0.0	0.0	0.0	0.0
72.5	2.0	2.0	2.1	2.0	1.3	0.6	1.9	1.6	0.3	0.0	0.0	0.0	0.0	0.0
75.0	2.0	2.0	2.0	1.9	1.2	0.5	0.5	0.3	0.2	0.0	0.0	0.0	0.0	0.0
77.5	1.9	1.9	1.9	1.8	1.1	0.5	0.4	0.3	0.1	0.0	0.0	0.0	0.0	0.0
80.0	1.7	1.7	1.7	1.6	1.0	0.4	0.3	0.2	0.1	0.0	0.0	0.0	0.0	0.0
82.5	1.6	1.6	1.6	1.5	1.0	0.4	0.3	0.2	0.1	0.0	0.0	0.0	0.0	0.0
85.0	1.7	1.6	1.6	1.5	1.2	0.5	0.3	0.2	0.1	0.0	0.0	0.0	0.0	0.0
87.5	2.1	2.1	2.1	2.1	1.6	0.5	0.3	0.2	0.1	0.0	0.0	0.0	0.0	0.0
90.0	3.2	3.2	3.2	3.1	2.4	0.6	0.3	0.2	0.1	0.0	0.0	0.0	0.0	0.0
92.5	4.3	4.3	4.2	4.1	3.0	0.7	0.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0
95.0	4.5	4.5	4.4	4.3	3.2	0.7	0.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0
97.5	4.3	4.2	4.3	4.2	3.1	0.7	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0
100.0	4.1	4.0	4.1	4.0	2.9	0.7	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0
102.5	3.9	3.9	3.9	3.8	2.7	0.7	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0
105.0	3.8	3.7	3.7	3.5	2.5	0.7	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0
107.5	3.6	3.6	3.5	3.4	2.4	0.6	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0
110.0	3.4	3.4	3.4	3.3	2.4	0.6	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0
112.5	3.3	3.3	3.3	3.2	2.2	0.5	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
115.0	3.2	3.2	3.2	3.0	1.9	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
117.5	3.1	3.1	3.0	2.8	1.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
120.0	2.7	2.8	2.5	1.9	0.5	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
122.5	1.9	1.9	1.5	0.8	0.3	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
125.0	0.8	0.8	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	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
130.0	0.3	0.3	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	0.1	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
140.0	0.1	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
142.5	0.1	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
145.0	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
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	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
152.5	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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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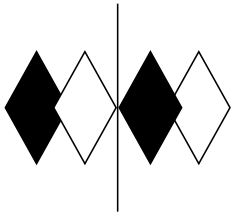
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CANDELA DISTRIBUTION  
 LATERAL ANGLE

	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	0.9
30- 35	3.2
35- 40	4.8
40- 45	5.7
45- 50	6.1
50- 55	5.5
55- 60	3.7
60- 65	1.9
65- 70	0.8
70- 75	0.4
75- 80	0.2
80- 85	0.2
85- 90	0.3
90- 95	0.5
95-100	0.5
100-105	0.5
105-110	0.4
110-115	0.4
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	0.9
0- 40	8.9
0- 50	20.7
0- 60	29.9
0- 70	32.7
0- 80	33.3
0- 90	33.8
0-100	34.8
0-110	35.6
0-120	36.2
0-130	36.4
0-140	36.4
0-150	36.5
0-160	36.5
0-170	36.5
0-180	36.5



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REPORT NUMBER: ITL87593-GONIOPHOTOMETRY

PAGE: 8 OF 9

ISSUE DATE: 06/17/16

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	104	100	96	92	94	91	88	89	86	84	84	82	80	80	78
2	97	89	82	76	94	86	80	74	81	76	72	77	73	69	73	69	66	66	64
3	87	76	68	61	84	74	66	60	70	64	58	66	61	56	63	58	54	54	52
4	79	66	57	50	76	64	55	49	61	53	47	57	51	46	54	49	44	44	42
5	71	57	47	40	68	55	46	40	52	45	39	50	43	38	47	41	36	36	34
6	64	50	40	33	62	48	39	33	46	38	32	43	36	31	41	35	30	30	28
7	58	44	34	27	56	42	33	27	40	32	26	38	31	25	36	30	25	25	22
8	53	38	29	23	51	37	28	22	35	27	22	33	26	21	32	25	21	21	18
9	49	34	25	19	47	33	25	19	31	24	18	30	23	18	28	22	17	17	15
10	45	30	22	16	43	30	21	16	28	20	15	26	20	15	25	19	14	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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PAGE: 9 OF 9

ADDRESS: 170 LUDLOW AVE.  
NORTHVALE, NJ 07647

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REPORT NUMBER: ITL87593-SPHERE  
DATE: 06/21/16  
PREPARED FOR: RAB LIGHTING INC.  
CATALOG NUMBER: FSLEDH3YB/120 - FSLEDH3YB/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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Checked	<i>N WHITE</i>
Approved	<i>P O'CONNOR</i> Sphere Lab Supervisor



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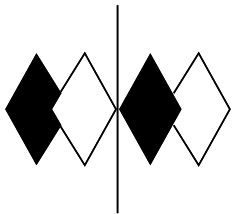
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RESULTS:

PHOTOMETRIC	
Total Integrated Flux (lumens)	36.5 *
SPECTRORADIOMETRIC	
Observer	CIE 1931 2 degree
Chromaticity Ordinate x	0.4276
Chromaticity Ordinate y	0.4023
Observer	CIE 1976 2 degree
Chromaticity Ordinate u'	0.2453
Chromaticity Ordinate v'	0.5193
Correlated Color Temp CCT (K)	3149
ANSI C78.377-2008 Duv	0.001
Total Radiant Flux (milliWatts)	110 *
Scotopic / Photopic Lumen Ratio	1.434
ELECTRICAL	
Input Voltage (Volts AC )	120.0
Input Current (Amps AC )	0.027
Input Power (Watts)	3.07
Input Power Factor (%)	94.8
Input Current THD (%)	31.4
Input Voltage THD (%)	0.3
EFFICACY (lumens/Watt)	11.9

COLOR RENDERING INDICES	CRI
Ra (Average 1-8)	82
R1 Light greyish red	79
R2 Dark greyish yellow	89
R3 Strong yellowish green	97
R4 Moderate yellowish green	80
R5 Light bluish green	80
R6 Light blue	87
R7 Light violet	83
R8 Light reddish purple	58
R9 Strong red	2
R10 Strong yellow	76
R11 Strong green	78
R12 Strong blue	70
R13 Light yellowish pink (skin)	81
R14 Moderate olive green (leaf)	99

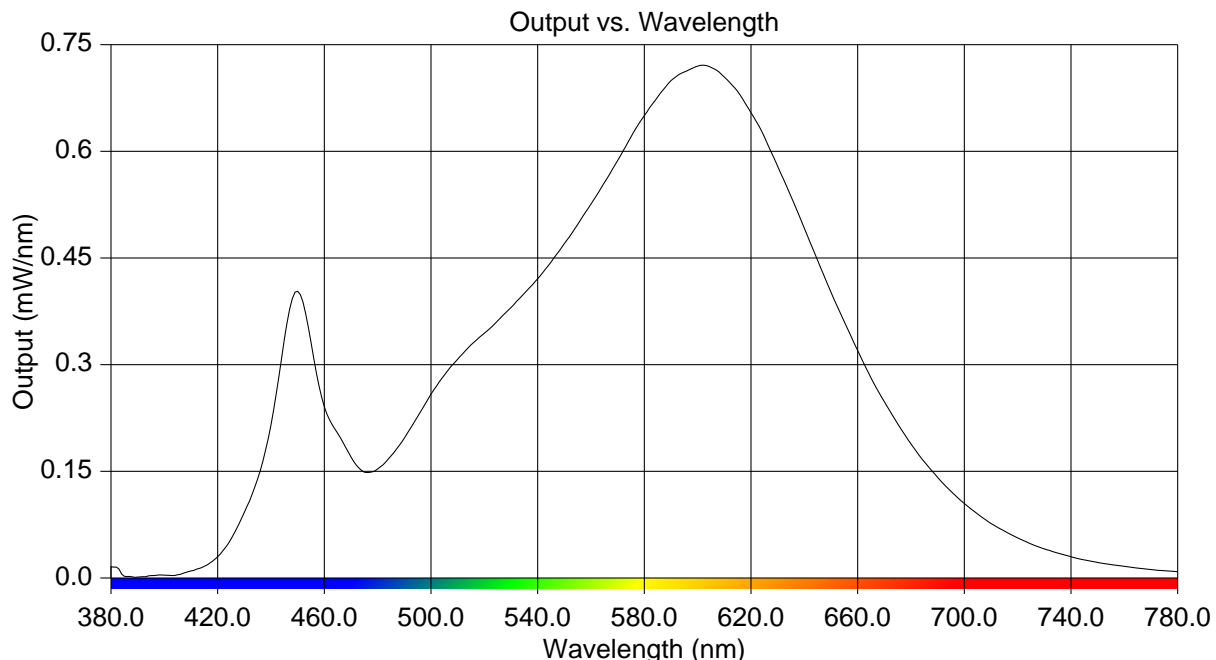
\*NOTE: The total lumen output shown on this report was obtained from photometric test ITL87593-GONIOPHOTOMETRY

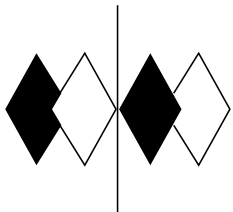


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RESULTS:

Wavelength	mW per nm	Wavelength	mW per nm	Wavelength	mW per nm
380	0.016	515	0.328	650	0.402
385	0.002	520	0.344	655	0.360
390	0.001	525	0.362	660	0.320
395	0.003	530	0.380	665	0.281
400	0.004	535	0.400	670	0.248
405	0.005	540	0.421	675	0.217
410	0.010	545	0.444	680	0.188
415	0.016	550	0.470	685	0.163
420	0.030	555	0.497	690	0.141
425	0.055	560	0.526	695	0.122
430	0.092	565	0.556	700	0.105
435	0.139	570	0.587	705	0.090
440	0.215	575	0.620	710	0.077
445	0.336	580	0.650	715	0.066
450	0.403	585	0.676	720	0.056
455	0.332	590	0.699	725	0.048
460	0.241	595	0.712	730	0.041
465	0.203	600	0.720	735	0.035
470	0.170	605	0.718	740	0.030
475	0.149	610	0.705	745	0.025
480	0.153	615	0.684	750	0.022
485	0.172	620	0.654	755	0.019
490	0.197	625	0.620	760	0.016
495	0.227	630	0.579	765	0.014
500	0.259	635	0.537	770	0.012
505	0.285	640	0.492	775	0.010
510	0.308	645	0.446	780	0.009





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### CIE Chromaticity Diagram

