

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

REPORT NUMBER: ITL87579-GONIOPHOTOMETRY

PAGE: 1 OF 9

ISSUE DATE: 06/17/16

PREPARED FOR: RAB LIGHTING INC.

CATALOG NUMBER: FSLEDH3NW/120 - FSLEDH3NW/120/TL

LUMINAIRE: CAST WHITE PAINTED METAL HOUSING/FACEPLATE, CAST WHITE 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 UP POSITION.

INPUT ELECTRICAL: 120.0 VOLTS, 3.06 WATTS, 0.0269 AMPS

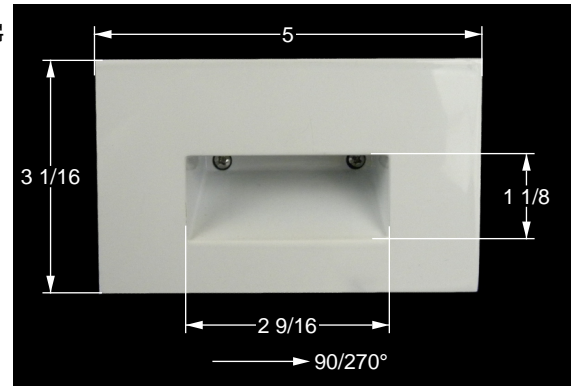
MOUNTING: RECESSED WALL

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

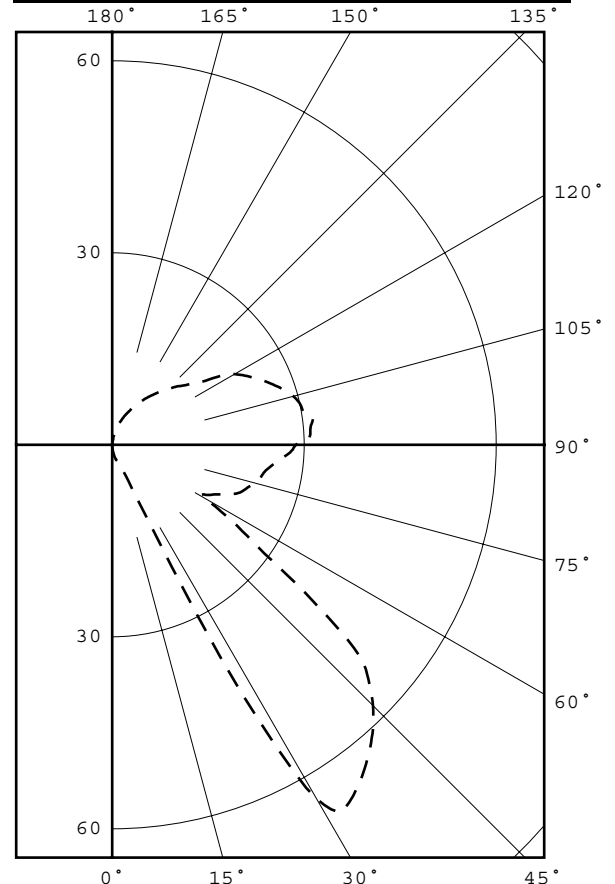
TEST DISTANCE = 20.0 FEET



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	0.6	0.4	0.0	0.0	0.0	0.0
15	2.5	1.7	0.0	0.0	0.0	0.2
25	9.9	3.2	0.0	0.0	0.0	1.8
35	66.2	25.5	0.0	0.0	0.0	9.7
45	57.6	56.2	0.0	0.0	0.0	14.0
55	27.7	45.1	0.0	0.0	0.0	11.8
65	18.3	18.8	0.0	0.0	0.0	7.2
75	23.0	13.2	0.0	0.0	0.0	7.0
85	26.3	15.6	0.0	0.0	0.0	8.2
90	28.7	16.9	0.0	0.0	0.0	
95	31.1	17.0	0.0	0.0	0.0	9.4
105	29.3	16.3	0.0	0.0	0.0	8.5
115	24.6	13.2	0.0	0.0	0.0	6.6
125	17.2	10.1	0.0	0.0	0.0	4.4
135	12.3	7.6	0.0	0.0	0.0	2.8
145	8.6	5.4	0.0	0.0	0.0	1.6
155	5.4	3.5	0.0	0.0	0.0	0.8
165	2.8	1.8	0.0	0.0	0.0	0.2
175	0.1	0.2	0.0	0.0	0.0	0.0
180	0.0	0.0	0.0	0.0	0.0	



ZONAL LUMEN SUMMARY

ZONE	LUMENS	%FIXT
0- 30	2.1	2.2
0- 40	11.8	12.5
0- 60	37.6	39.9
0- 90	60.0	63.7
90-120	24.5	26.0
90-130	28.9	30.7
90-150	33.2	35.3
90-180	34.2	36.3
0-180	94.2	100.0

EFFICACY = 30.8 lm/W
CIE TYPE - SEMI-DIRECT
PLANE : 0-DEG 90-DEG
BEAM ANGLE (50%) : 26.8 X N/A DEGREES
FIELD ANGLE (10%) : 127.0 X N/A DEGREES

Checked B. HYRE
Approved R. BEATTIE
Lighting Engineer



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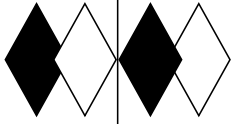
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PAGE: 2 OF 9

LUMINANCE DATA IN CANDELA/SQ M

ANGLE IN DEG	AVERAGE 0-DEG	AVERAGE 45-DEG	AVERAGE 90-DEG
45	44640.	62222.	0.
55	17890.	41121.	0.
65	10910.	16189.	0.
75	12732.	10230.	0.
85	14057.	12090.	0.



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NVLAP LAB CODE: 200925-0

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PAGE: 3 OF 9

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	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
5.0	0.6	0.6	0.6	0.5	0.5	0.4	0.3	0.2	0.1	0.0	0.0	0.0	0.0	0.0
7.5	1.1	1.1	1.0	0.9	0.8	0.7	0.5	0.3	0.1	0.0	0.0	0.0	0.0	0.0
10.0	1.6	1.5	1.5	1.4	1.2	1.0	0.8	0.5	0.2	0.1	0.0	0.0	0.0	0.0
12.5	2.1	2.1	2.0	1.8	1.6	1.3	1.0	0.7	0.3	0.1	0.0	0.0	0.0	0.0
15.0	2.5	2.5	2.5	2.4	2.0	1.7	1.3	0.9	0.5	0.1	0.0	0.0	0.0	0.0
17.5	3.1	3.1	3.0	2.7	2.4	2.1	1.6	1.0	0.6	0.1	0.0	0.0	0.0	0.0
20.0	3.8	3.8	3.6	3.3	2.8	2.4	1.9	1.3	0.7	0.1	0.0	0.0	0.0	0.0
22.5	4.6	4.6	4.4	4.0	3.3	2.8	2.2	1.5	0.8	0.1	0.0	0.0	0.0	0.0
25.0	9.9	9.1	6.1	4.8	4.0	3.2	2.4	1.7	0.9	0.2	0.0	0.0	0.0	0.0
27.5	43.5	43.3	35.3	11.2	4.8	3.7	2.7	1.9	1.0	0.2	0.0	0.0	0.0	0.0
30.0	63.9	62.9	55.6	43.5	11.3	4.4	3.1	2.2	1.1	0.2	0.0	0.0	0.0	0.0
32.5	67.5	67.4	67.1	61.9	41.7	5.8	3.5	2.3	1.3	0.3	0.0	0.0	0.0	0.0
35.0	66.2	66.1	66.2	65.6	58.3	25.5	4.0	2.5	1.4	0.3	0.0	0.0	0.0	0.0
37.5	64.5	64.4	64.6	64.1	63.2	44.5	4.5	2.8	1.5	0.3	0.0	0.0	0.0	0.0
40.0	62.5	62.5	62.6	62.2	61.6	58.3	11.8	3.0	1.6	0.4	0.0	0.0	0.0	0.0
42.5	60.3	60.2	60.5	60.1	59.6	58.3	28.1	3.3	1.8	0.4	0.0	0.0	0.0	0.0
45.0	57.6	57.6	57.9	57.7	57.3	56.2	39.3	3.5	1.9	0.4	0.0	0.0	0.0	0.0
47.5	54.3	54.4	54.9	54.9	54.7	53.7	43.1	4.6	2.0	0.5	0.0	0.0	0.0	0.0
50.0	49.3	49.5	50.8	51.9	51.9	51.0	41.2	10.2	2.0	0.5	0.0	0.0	0.0	0.0
52.5	38.0	38.2	43.2	47.6	48.8	48.2	39.0	11.5	2.1	0.6	0.0	0.0	0.0	0.0
55.0	27.7	27.9	29.9	38.2	44.9	45.1	36.8	11.8	2.2	0.6	0.0	0.0	0.0	0.0
57.5	22.2	22.3	24.5	27.2	37.2	41.7	34.2	11.7	2.4	0.6	0.0	0.0	0.0	0.0
60.0	16.8	16.9	18.0	22.0	25.6	37.0	31.6	11.0	2.5	0.6	0.0	0.0	0.0	0.0
62.5	17.0	16.9	16.7	16.7	20.6	26.2	28.9	10.5	2.7	0.7	0.0	0.0	0.0	0.0
65.0	18.3	18.2	17.8	16.6	15.2	18.8	24.9	9.9	2.9	0.7	0.0	0.0	0.0	0.0
67.5	20.2	20.1	19.5	18.0	15.1	13.3	17.5	9.4	3.3	0.7	0.0	0.0	0.0	0.0
70.0	21.5	21.5	21.2	19.9	16.3	11.7	12.9	8.7	3.5	0.8	0.0	0.0	0.0	0.0
72.5	22.2	22.2	21.9	20.8	17.7	12.5	8.6	7.4	3.5	0.8	0.0	0.0	0.0	0.0
75.0	23.0	23.0	22.7	21.4	18.1	13.2	8.6	6.3	3.5	0.9	0.0	0.0	0.0	0.0
77.5	23.7	23.7	23.3	22.1	18.6	13.8	9.0	6.5	3.6	0.9	0.0	0.0	0.0	0.0
80.0	24.2	24.2	23.8	22.4	19.2	14.4	9.5	6.8	3.8	1.0	0.0	0.0	0.0	0.0
82.5	25.1	25.0	24.5	22.9	19.6	14.8	9.9	7.0	3.8	1.0	0.0	0.0	0.0	0.0
85.0	26.3	26.2	25.7	24.0	20.6	15.6	10.4	7.3	3.9	1.0	0.0	0.0	0.0	0.0
87.5	27.8	27.7	27.1	25.4	22.1	16.4	11.0	7.5	4.0	1.0	0.0	0.0	0.0	0.0
90.0	28.7	28.7	28.4	26.9	23.0	16.9	11.5	7.7	4.0	1.0	0.0	0.0	0.0	0.0
92.5	30.9	30.8	30.2	29.0	24.8	16.9	11.8	7.8	4.1	1.0	0.0	0.0	0.0	0.0
95.0	31.1	31.1	30.6	28.9	24.7	17.0	12.0	7.9	4.0	1.0	0.0	0.0	0.0	0.0
97.5	31.6	31.3	30.5	28.8	24.1	17.2	12.1	7.8	4.0	1.0	0.0	0.0	0.0	0.0
100.0	30.3	30.2	29.5	27.9	23.6	17.2	12.1	7.7	3.9	1.0	0.0	0.0	0.0	0.0
102.5	30.0	29.8	28.9	27.4	23.2	16.8	11.9	7.5	3.7	0.9	0.0	0.0	0.0	0.0
105.0	29.3	29.1	28.3	26.3	22.4	16.3	11.5	7.2	3.6	0.9	0.0	0.0	0.0	0.0
107.5	28.3	28.2	27.2	25.4	21.2	15.6	11.1	6.9	3.4	0.8	0.0	0.0	0.0	0.0
110.0	27.1	27.0	26.0	24.2	20.3	14.9	10.6	6.7	3.3	0.8	0.0	0.0	0.0	0.0
112.5	25.9	25.8	24.6	22.8	19.3	14.1	10.0	6.4	3.2	0.8	0.0	0.0	0.0	0.0
115.0	24.6	24.5	23.5	21.7	18.2	13.2	9.5	6.1	3.1	0.7	0.0	0.0	0.0	0.0
117.5	23.4	23.3	22.5	20.4	16.4	12.3	9.0	5.8	2.9	0.7	0.0	0.0	0.0	0.0
120.0	22.1	21.9	20.8	18.3	14.6	11.5	8.5	5.5	2.8	0.7	0.0	0.0	0.0	0.0
122.5	20.0	19.8	18.6	16.0	13.4	10.8	8.0	5.2	2.7	0.7	0.0	0.0	0.0	0.0
125.0	17.2	17.0	16.1	14.6	12.5	10.1	7.5	4.9	2.5	0.6	0.0	0.0	0.0	0.0
127.5	15.6	15.5	14.8	13.5	11.7	9.5	7.0	4.6	2.4	0.6	0.0	0.0	0.0	0.0
130.0	14.4	14.3	13.7	12.6	10.8	8.8	6.6	4.3	2.3	0.6	0.0	0.0	0.0	0.0
132.5	13.4	13.3	12.7	11.6	10.1	8.2	6.1	4.1	2.2	0.5	0.0	0.0	0.0	0.0
135.0	12.3	12.2	11.7	10.7	9.3	7.6	5.7	3.8	2.0	0.5	0.0	0.0	0.0	0.0
137.5	11.3	11.3	10.8	9.9	8.6	7.0	5.3	3.6	1.9	0.5	0.0	0.0	0.0	0.0
140.0	10.4	10.4	9.9	9.1	7.9	6.5	4.9	3.3	1.8	0.4	0.0	0.0	0.0	0.0
142.5	9.5	9.4	9.0	8.3	7.2	5.9	4.5	3.1	1.6	0.4	0.0	0.0	0.0	0.0
145.0	8.6	8.5	8.2	7.5	6.5	5.4	4.1	2.8	1.5	0.4	0.0	0.0	0.0	0.1
147.5	7.7	7.7	7.4	6.8	5.9	4.9	3.7	2.6	1.4	0.4	0.0	0.0	0.0	0.0
150.0	6.9	6.9	6.6	6.1	5.3	4.4	3.4	2.3	1.3	0.3	0.0	0.0	0.0	0.0
152.5	6.1	6.1	5.9	5.4	4.7	3.9	3.0	2.1	1.1	0.3	0.0	0.0	0.0	0.0
155.0	5.4	5.4	5.2	4.8	4.2	3.5	2.7	1.9	1.0	0.2	0.0	0.0	0.0	0.0
157.5	4.7	4.7	4.5	4.2	3.7	3.1	2.4	1.6	0.9	0.2	0.0	0.0	0.0	0.0



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PAGE: 4 OF 9

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	4.0	4.0	3.9	3.6	3.2	2.6	2.0	1.4	0.8	0.2	0.0	0.0	0.0	0.0
162.5	3.4	3.4	3.3	3.0	2.7	2.2	1.7	1.2	0.7	0.1	0.0	0.0	0.0	0.0
165.0	2.8	2.8	2.7	2.5	2.2	1.8	1.4	1.0	0.5	0.1	0.0	0.0	0.0	0.0
167.5	2.2	2.2	2.1	1.7	1.7	1.5	1.1	0.8	0.4	0.1	0.0	0.0	0.0	0.0
170.0	1.3	1.3	1.4	1.3	1.0	0.9	0.7	0.5	0.2	0.0	0.0	0.0	0.0	0.0
172.5	0.4	0.4	0.5	0.5	0.5	0.5	0.4	0.3	0.1	0.0	0.0	0.0	0.0	0.0
175.0	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0
177.5	0.0	0.0	0.0	0.0	0.0	0.1	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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PAGE: 5 OF 9

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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PAGE: 6 OF 9

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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PAGE: 7 OF 9

5-DEGREE
ZONAL LUMEN SUMMARY

0- 5	0.0
5- 10	0.0
10- 15	0.1
15- 20	0.2
20- 25	0.3
25- 30	1.5
30- 35	4.0
35- 40	5.7
40- 45	6.8
45- 50	7.2
50- 55	6.7
55- 60	5.2
60- 65	3.8
65- 70	3.3
70- 75	3.4
75- 80	3.6
80- 85	3.9
85- 90	4.3
90- 95	4.7
95-100	4.7
100-105	4.4
105-110	4.1
110-115	3.6
115-120	3.0
120-125	2.4
125-130	1.9
130-135	1.5
135-140	1.2
140-145	0.9
145-150	0.7
150-155	0.5
155-160	0.3
160-165	0.2
165-170	0.1
170-175	0.0
175-180	0.0

10-DEGREE
ZONAL LUMEN SUMMARY

0- 10	0.0
0- 20	0.3
0- 30	2.1
0- 40	11.8
0- 50	25.8
0- 60	37.6
0- 70	44.8
0- 80	51.8
0- 90	60.0
0-100	69.4
0-110	77.9
0-120	84.5
0-130	88.9
0-140	91.6
0-150	93.2
0-160	94.0
0-170	94.2
0-180	94.2



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REPORT NUMBER: ITL87579-GONIOPHOTOMETRY

PAGE: 8 OF 9

ISSUE DATE: 06/17/16

PREPARED FOR: RAB LIGHTING INC.

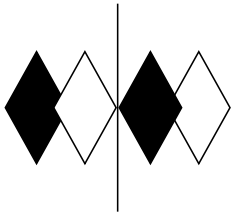
COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

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	110	110	110	110	110	104	104	104	104	91	91	91	79	79	79	69	69	69	64
1	97	91	85	80	90	85	80	75	74	70	66	64	61	58	54	52	50	45	45
2	86	77	69	62	80	72	65	59	62	57	52	53	49	45	45	42	39	35	35
3	78	66	57	49	72	61	53	47	53	47	41	46	40	36	39	34	31	27	27
4	70	57	47	40	65	53	45	38	46	39	33	39	34	29	33	29	25	21	21
5	64	50	40	33	59	46	38	31	40	33	27	34	28	24	29	24	20	17	17
6	58	44	34	27	54	41	32	26	35	28	23	30	24	20	25	21	17	14	14
7	53	39	30	23	49	36	28	22	31	24	19	27	21	17	22	18	14	11	11
8	49	35	26	20	45	32	24	18	28	21	16	24	18	14	20	15	12	9	9
9	45	31	23	17	42	29	21	16	25	18	14	22	16	12	18	13	10	8	8
10	42	28	20	14	39	26	19	14	23	16	12	19	14	10	16	12	8	6	6

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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Page 1 of 4

REPORT NUMBER: ITL87579-SPHERE
DATE: 06/20/16
PREPARED FOR: RAB LIGHTING INC.
CATALOG NUMBER: FSLEDH3NW/120 - FSLEDH3NW/120/TL

ADDRESS: 170 LUDLOW AVE.
NORTHVALE, NJ 07647

LUMINAIRE: CAST WHITE PAINTED METAL HOUSING/FACEPLATE, CAST WHITE 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.

INSTRUMENTS:	Associated Power Technologies APT5020 AC Power Source	Calibration Due: 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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FEDERAL GOVERNMENT.

Checked	<i>N WHITE</i>
Approved	<i>P O'CONNOR</i> Sphere Lab Supervisor



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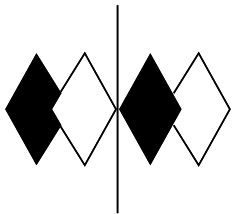
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RESULTS:

PHOTOMETRIC	
Total Integrated Flux (lumens)	94.2 *
SPECTRORADIOMETRIC	
Observer	CIE 1931 2 degree
Chromaticity Ordinate x	0.3680
Chromaticity Ordinate y	0.3719
Observer	CIE 1976 2 degree
Chromaticity Ordinate u'	0.2188
Chromaticity Ordinate v'	0.4976
Correlated Color Temp CCT (K)	4323
ANSI C78.377-2008 Duv	0.002
Total Radiant Flux (milliWatts)	288 *
Scotopic / Photopic Lumen Ratio	1.792
ELECTRICAL	
Input Voltage (Volts AC)	120.0
Input Current (Amps AC)	0.027
Input Power (Watts)	3.06
Input Power Factor (%)	94.4
Input Current THD (%)	31.0
Input Voltage THD (%)	0.3
EFFICACY (lumens/Watt)	30.8

COLOR RENDERING INDICES	CRI
Ra (Average 1-8)	82
R1 Light greyish red	79
R2 Dark greyish yellow	87
R3 Strong yellowish green	93
R4 Moderate yellowish green	82
R5 Light bluish green	80
R6 Light blue	82
R7 Light violet	86
R8 Light reddish purple	65
R9 Strong red	5
R10 Strong yellow	69
R11 Strong green	81
R12 Strong blue	63
R13 Light yellowish pink (skin)	81
R14 Moderate olive green (leaf)	96

*NOTE: The total lumen output shown on this report was obtained from photometric test ITL87579-GONIOPHOTOMETRY



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Page 3 of 4

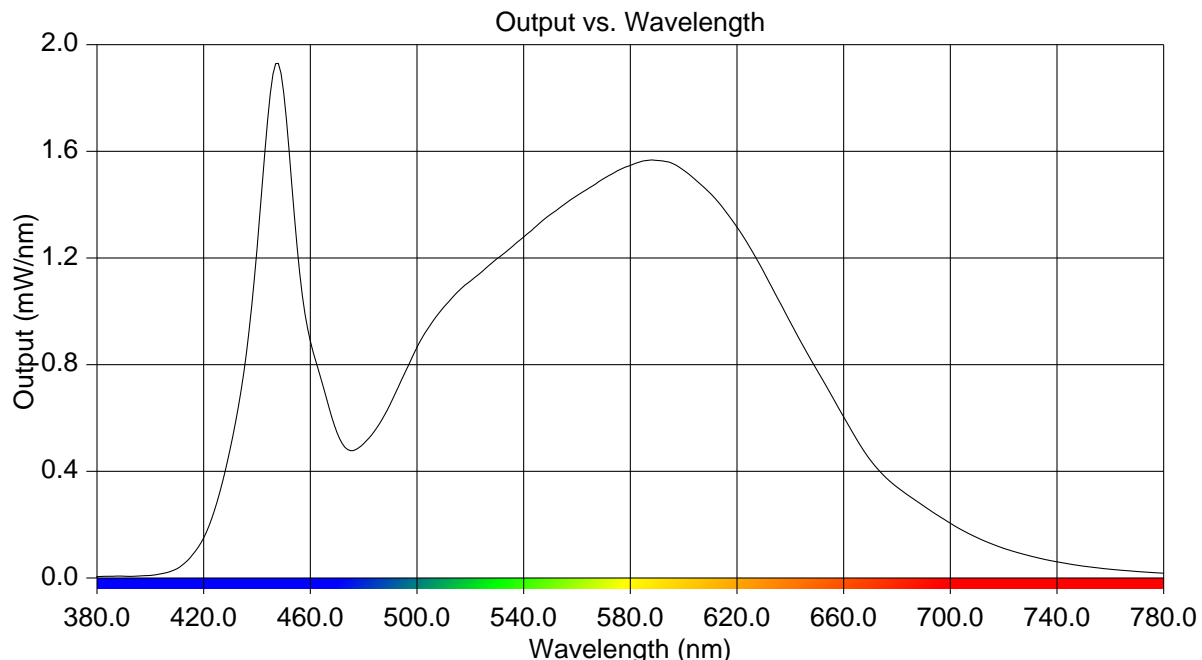
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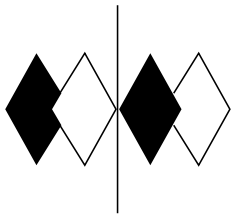
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RESULTS:

Wavelength	mW per nm	Wavelength	mW per nm	Wavelength	mW per nm
380	0.006	515	1.070	650	0.779
385	0.006	520	1.113	655	0.693
390	0.007	525	1.154	660	0.604
395	0.007	530	1.197	665	0.518
400	0.010	535	1.237	670	0.442
405	0.018	540	1.279	675	0.385
410	0.035	545	1.322	680	0.341
415	0.077	550	1.363	685	0.304
420	0.150	555	1.399	690	0.270
425	0.284	560	1.434	695	0.237
430	0.487	565	1.465	700	0.205
435	0.767	570	1.498	705	0.176
440	1.233	575	1.526	710	0.152
445	1.818	580	1.547	715	0.130
450	1.821	585	1.564	720	0.111
455	1.246	590	1.566	725	0.096
460	0.889	595	1.558	730	0.082
465	0.712	600	1.529	735	0.071
470	0.545	605	1.488	740	0.061
475	0.478	610	1.442	745	0.052
480	0.504	615	1.384	750	0.044
485	0.564	620	1.316	755	0.038
490	0.653	625	1.237	760	0.033
495	0.760	630	1.149	765	0.028
500	0.865	635	1.053	770	0.024
505	0.949	640	0.959	775	0.021
510	1.015	645	0.867	780	0.018





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CIE Chromaticity Diagram

