

REPORT NUMBER: ITL87601-GONIOPHOTOMETRY

PAGE: 1 OF 9

ISSUE DATE: 06/17/16

PREPARED FOR: RAB LIGHTING INC.

CATALOG NUMBER: FSLEDV3YB/120 - FSLEDV3YB/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

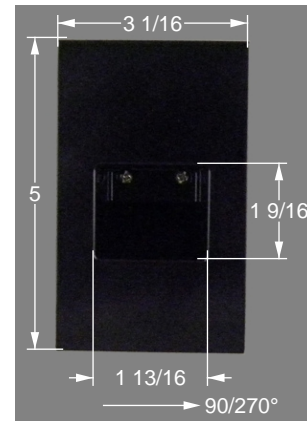
MOUNTING: RECESSED WALL

LED DRIVER: INTEGRAL TO CIRCUIT BOARD

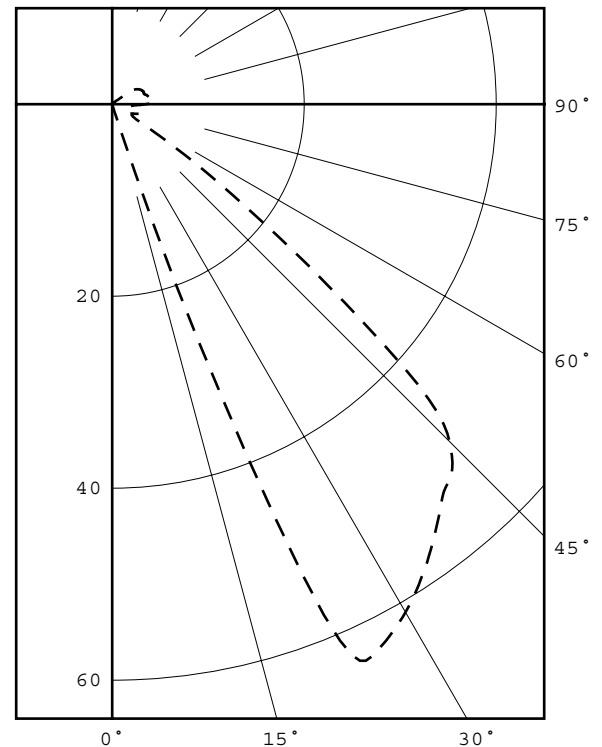
NOTE: DATA SHOWN IS ABSOLUTE FOR THE SAMPLE PROVIDED AT RATED INPUT VOLTAGE (120VAC, 60Hz) TO THE LUMINAIRE.

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	0.4	0.0	0.0	0.0	0.0	0.1
25	63.6	2.2	0.0	0.0	0.0	5.4
35	57.5	44.9	0.0	0.0	0.0	10.2
45	49.7	37.2	0.0	0.0	0.0	10.7
55	9.5	27.3	0.0	0.0	0.0	5.6
65	2.3	4.0	0.0	0.0	0.0	1.2
75	2.6	0.5	0.0	0.0	0.0	0.5
85	2.0	0.4	0.0	0.0	0.0	0.4
90	3.5	0.4	0.0	0.0	0.0	0.0
95	4.3	0.3	0.0	0.0	0.0	0.7
105	3.7	0.3	0.0	0.0	0.0	0.6
115	3.4	0.1	0.0	0.0	0.0	0.5
125	2.1	0.1	0.0	0.0	0.0	0.2
135	0.2	0.0	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 ZONE	SUMMARY LUMENS	%FIXT
0- 30	5.5	15.4
0- 40	15.7	43.6
0- 60	32.0	89.0
0- 90	34.1	94.6
90-120	1.7	4.7
90-130	1.9	5.3
90-150	1.9	5.4
90-180	1.9	5.4
0-180	36.0	100.0

EFFICACY = 11.7 lm/W

CIE TYPE - DIRECT

PLANE : 0-DEG 90-DEG

BEAM ANGLE (50%) : 29.0 X N/A DEGREES

FIELD ANGLE (10%) : 38.2 X N/A DEGREES

Checked J. VILLANUEVA  
Approved R. BEATTIE  
Lighting Engineer



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 4066 CAMELOT CIRCLE, LONGMONT, CO 80504 USA

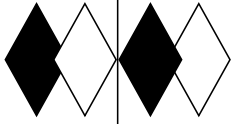
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LUMINANCE DATA IN CANDELA/SQ M

ANGLE IN DEG	AVERAGE 0-DEG	AVERAGE 45-DEG	AVERAGE 90-DEG
45	38518.	41186.	0.
55	6402.	26447.	0.
65	1371.	3444.	0.
75	1493.	408.	0.
85	1107.	310.	0.



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NVLAP LAB CODE: 200925-0

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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
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	0.2	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
15.0	0.4	0.4	0.3	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17.5	1.2	1.2	0.7	0.5	0.4	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20.0	26.0	25.3	14.9	2.8	0.6	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22.5	57.6	56.7	49.2	36.4	5.7	0.5	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25.0	63.6	63.9	64.0	60.9	39.1	2.2	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0
27.5	62.5	62.8	63.1	63.4	61.3	17.5	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0
30.0	61.1	61.3	61.5	61.8	63.1	35.0	2.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
32.5	59.4	59.6	59.8	60.1	61.4	45.2	11.9	0.2	0.0	0.0	0.0	0.0	0.0	0.0
35.0	57.5	57.6	57.8	58.2	59.4	44.9	19.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0
37.5	55.5	55.6	55.9	56.1	57.1	43.4	20.1	0.3	0.0	0.0	0.0	0.0	0.0	0.0
40.0	53.5	53.5	53.7	53.9	54.8	41.4	20.2	0.4	0.0	0.0	0.0	0.0	0.0	0.0
42.5	52.3	52.2	51.8	51.5	52.3	39.4	19.7	0.6	0.0	0.0	0.0	0.0	0.0	0.0
45.0	49.7	49.8	50.0	49.5	49.7	37.2	18.7	0.8	0.0	0.0	0.0	0.0	0.0	0.0
47.5	43.1	43.6	45.6	47.0	46.8	35.0	17.5	1.1	0.0	0.0	0.0	0.0	0.0	0.0
50.0	29.2	29.9	34.9	41.6	43.9	32.5	16.2	1.5	0.1	0.0	0.0	0.0	0.0	0.0
52.5	17.5	17.7	20.7	29.5	39.2	30.1	15.1	1.5	0.1	0.0	0.0	0.0	0.0	0.0
55.0	9.5	10.0	12.9	17.1	28.8	27.3	13.8	1.4	0.1	0.0	0.0	0.0	0.0	0.0
57.5	3.4	3.5	4.5	9.6	15.9	23.1	12.7	1.3	0.1	0.0	0.0	0.0	0.0	0.0
60.0	2.4	2.4	2.4	2.9	9.1	15.9	11.3	1.1	0.1	0.0	0.0	0.0	0.0	0.0
62.5	2.3	2.2	2.2	1.8	2.3	10.2	9.4	1.0	0.1	0.0	0.0	0.0	0.0	0.0
65.0	2.3	2.3	2.1	1.6	1.1	4.0	5.2	0.9	0.1	0.0	0.0	0.0	0.0	0.0
67.5	2.6	2.6	2.3	1.5	0.9	1.0	1.4	0.8	0.1	0.0	0.0	0.0	0.0	0.0
70.0	2.9	2.8	2.5	1.6	0.9	0.7	0.6	0.6	0.1	0.0	0.0	0.0	0.0	0.0
72.5	2.9	2.8	2.5	1.5	0.8	0.6	0.5	0.4	0.1	0.0	0.0	0.0	0.0	0.0
75.0	2.6	2.6	2.3	1.4	0.7	0.5	0.4	0.3	0.1	0.0	0.0	0.0	0.0	0.0
77.5	2.3	2.3	2.0	1.1	0.6	0.5	0.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0
80.0	2.0	2.0	1.8	1.0	0.5	0.4	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0
82.5	1.9	1.9	1.7	0.9	0.5	0.4	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0
85.0	2.0	1.9	1.7	1.0	0.5	0.4	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0
87.5	2.5	2.4	2.3	1.1	0.6	0.4	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0
90.0	3.5	3.5	3.2	1.6	0.6	0.4	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0
92.5	4.3	4.3	3.9	1.9	0.5	0.4	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
95.0	4.3	4.3	4.1	2.0	0.5	0.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
97.5	4.0	4.0	3.8	1.8	0.4	0.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100.0	3.9	3.9	3.7	1.7	0.4	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
102.5	3.8	3.8	3.6	1.7	0.4	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
105.0	3.7	3.7	3.4	1.6	0.4	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
107.5	3.5	3.6	3.3	1.6	0.4	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110.0	3.5	3.5	3.2	1.6	0.4	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
112.5	3.5	3.5	3.2	1.5	0.4	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
115.0	3.4	3.4	3.1	1.5	0.3	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
117.5	3.3	3.3	3.0	1.4	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
120.0	3.1	3.1	2.8	1.3	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
122.5	2.9	2.8	2.5	1.0	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
125.0	2.1	2.1	1.5	0.4	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
127.5	0.9	0.8	0.5	0.2	0.1	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	0.3	0.2	0.1	0.1	0.0	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
137.5	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	0.0
140.0	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
142.5	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
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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
150.0	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
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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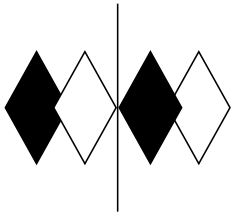
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CANDELA DISTRIBUTION  
 LATERAL ANGLE

	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	0.1
20- 25	1.7
25- 30	3.7
30- 35	4.8
35- 40	5.3
40- 45	5.5
45- 50	5.2
50- 55	3.7
55- 60	1.9
60- 65	0.8
65- 70	0.3
70- 75	0.3
75- 80	0.2
80- 85	0.2
85- 90	0.2
90- 95	0.3
95-100	0.3
100-105	0.3
105-110	0.3
110-115	0.2
115-120	0.2
120-125	0.2
125-130	0.1
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	0.1
0- 30	5.5
0- 40	15.7
0- 50	26.4
0- 60	32.0
0- 70	33.2
0- 80	33.7
0- 90	34.1
0-100	34.7
0-110	35.3
0-120	35.7
0-130	36.0
0-140	36.0
0-150	36.0
0-160	36.0
0-170	36.0
0-180	36.0



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REPORT NUMBER: ITL87601-GONIOPHOTOMETRY

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ISSUE DATE: 06/17/16

PREPARED FOR: RAB LIGHTING INC.

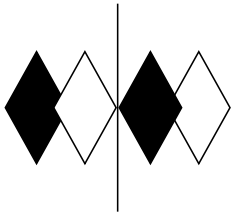
COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

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	118	118	118	118	118	114	114	114	114	108	108	108	102	102	102	97	97	97	95
1	109	105	101	98	106	102	99	96	97	94	92	92	90	88	88	86	84	84	82
2	100	92	86	81	97	90	84	80	86	81	77	82	78	74	78	75	72	72	70
3	91	81	74	68	88	79	72	67	76	70	65	72	67	63	69	65	61	61	59
4	83	72	63	57	80	70	62	56	67	60	55	64	58	54	61	56	52	52	50
5	76	63	55	48	73	62	54	48	59	52	47	57	50	46	54	49	45	45	42
6	69	56	47	41	67	55	47	40	53	45	40	50	44	39	48	43	38	38	36
7	63	50	41	35	61	49	41	35	47	39	34	45	38	33	43	37	33	33	31
8	58	45	36	30	56	44	35	30	42	34	29	40	34	29	39	33	28	28	26
9	54	40	32	26	52	39	31	26	38	30	25	36	30	25	35	29	24	24	22
10	50	36	28	22	48	35	28	22	34	27	22	33	26	22	31	25	21	21	19

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: ITL87601-SPHERE  
DATE: 06/21/16  
PREPARED FOR: RAB LIGHTING INC.  
CATALOG NUMBER: FSLEDV3YB/120 - FSLEDV3YB/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 N WHITE  
Approved P O'CONNOR  
Sphere Lab Supervisor



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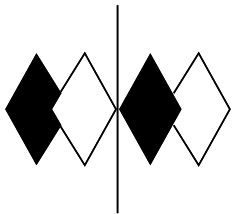
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RESULTS:

PHOTOMETRIC	
Total Integrated Flux (lumens)	36.0 *
SPECTRORADIOMETRIC	
Observer	CIE 1931 2 degree
Chromaticity Ordinate x	0.4264
Chromaticity Ordinate y	0.4006
Observer	CIE 1976 2 degree
Chromaticity Ordinate u'	0.2453
Chromaticity Ordinate v'	0.5184
Correlated Color Temp CCT (K)	3157
ANSI C78.377-2008 Duv	0.000
Total Radiant Flux (milliWatts)	109 *
Scotopic / Photopic Lumen Ratio	1.442
ELECTRICAL	
Input Voltage (Volts AC )	120.0
Input Current (Amps AC )	0.027
Input Power (Watts)	3.08
Input Power Factor (%)	95.1
Input Current THD (%)	31.3
Input Voltage THD (%)	0.2
EFFICACY (lumens/Watt)	11.7

COLOR RENDERING INDICES		CRI
Ra (Average 1-8)		82
R1	Light greyish red	79
R2	Dark greyish yellow	90
R3	Strong yellowish green	97
R4	Moderate yellowish green	80
R5	Light bluish green	80
R6	Light blue	88
R7	Light violet	83
R8	Light reddish purple	58
R9	Strong red	3
R10	Strong yellow	77
R11	Strong green	78
R12	Strong blue	71
R13	Light yellowish pink (skin)	82
R14	Moderate olive green (leaf)	99

\*NOTE: The total lumen output shown on this report was obtained from photometric test ITL87601-GONIOPHOTOMETRY



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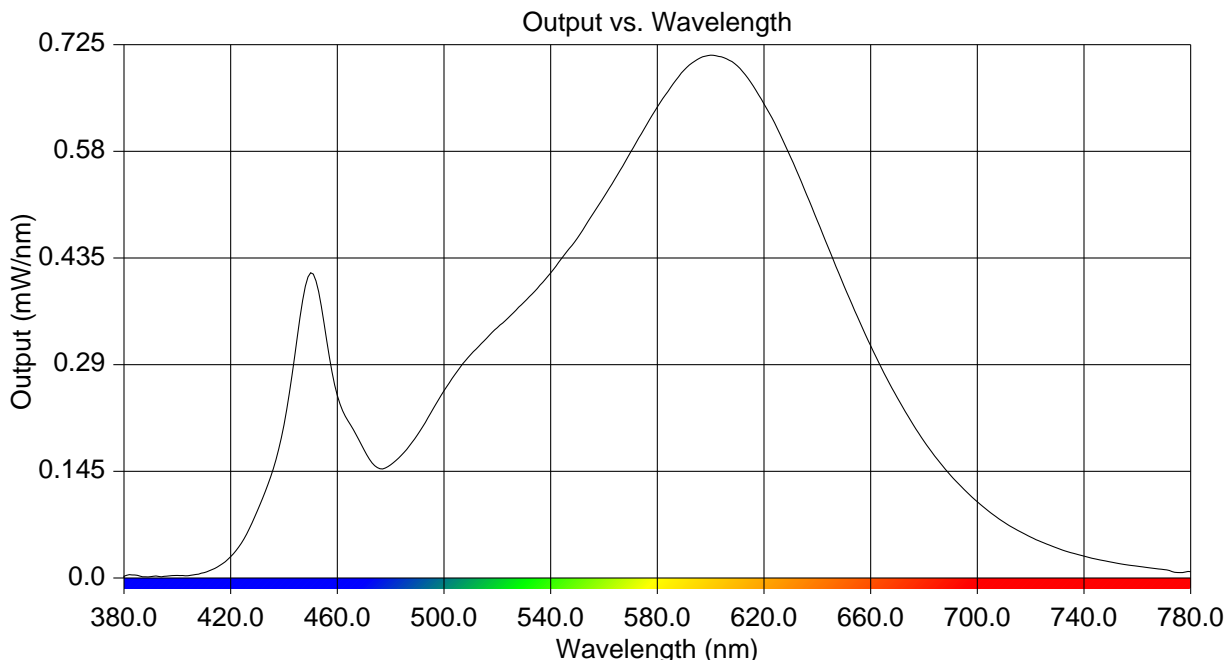
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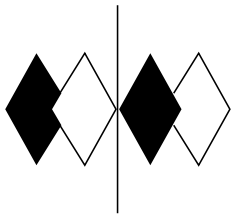
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RESULTS:

Wavelength	mW per nm	Wavelength	mW per nm	Wavelength	mW per nm
380	0.002	515	0.322	650	0.397
385	0.004	520	0.340	655	0.356
390	0.002	525	0.357	660	0.316
395	0.002	530	0.375	665	0.279
400	0.003	535	0.394	670	0.245
405	0.004	540	0.415	675	0.214
410	0.007	545	0.439	680	0.186
415	0.015	550	0.462	685	0.161
420	0.029	555	0.490	690	0.139
425	0.053	560	0.518	695	0.120
430	0.091	565	0.548	700	0.104
435	0.138	570	0.579	705	0.089
440	0.208	575	0.610	710	0.076
445	0.328	580	0.640	715	0.065
450	0.415	585	0.667	720	0.056
455	0.347	590	0.690	725	0.048
460	0.248	595	0.705	730	0.041
465	0.208	600	0.711	735	0.034
470	0.174	605	0.707	740	0.030
475	0.150	610	0.696	745	0.025
480	0.154	615	0.674	750	0.022
485	0.171	620	0.644	755	0.018
490	0.194	625	0.611	760	0.016
495	0.224	630	0.572	765	0.014
500	0.255	635	0.530	770	0.011
505	0.281	640	0.486	775	0.007
510	0.304	645	0.441	780	0.009





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## CIE Chromaticity Diagram

