

REPORT NUMBER: ITL90616-GONIOPHOTOMETRY

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ISSUE DATE: 07/13/18

PREPARED FOR: SOFTFORM LIGHTING, LLC

ADDRESS: 4539 WELLINGTON ROAD
BOULDER, CO 80301

CATALOG NUMBER: SFR24 9/16 HTW HO 40 MVOLT

LUMINAIRE: EXTRUDED WHITE PAINTED HOUSING, FABRICATED WHITE PAINTED METAL TOP/REFLECTOR, 12 WHITE CIRCUIT BOARDS EACH WITH 48 LEDS, WHITE FABRIC DIFFUSER.

LAMPS: FIVE HUNDRED SEVENTY-SIX WHITE LIGHT EMITTING DIODES (LEDS), VERTICAL BASE-UP POSITION.

INPUT ELECTRICAL: 120.0 VOLTS, 74.4 WATTS, 0.623 AMPS

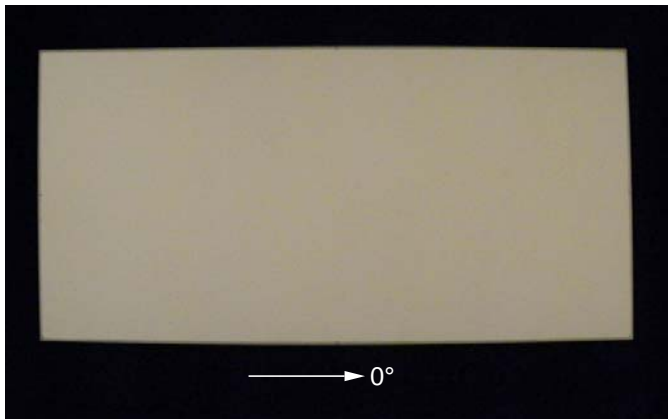
MOUNTING: RECESSED

LED DRIVER: OSRAM OTi 85/120-277/2A3 DIM L, DRIVER HAS MULTIPLE LEADS, ONLY LINE INPUT AND LED OUTPUT LEADS CONNECTED FOR THIS TEST, CLIENT STATES DRIVER PROGRAMMED FOR 1500mA OUTPUT.

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

TEST PROCEDURE: IESNA LM-79-08

TEST DISTANCE = 35.0 FEET



THIS REPORT WITH THE USE OF THE NVLAP LOGO SHALL NOT BE USED BY THE CLIENT TO CLAIM PRODUCT CERTIFICATION, APPROVAL, OR ENDORSEMENT BY NVLAP, NIST, OR ANY AGENCY OF THE FEDERAL GOVERNMENT.

Approved C STOUT

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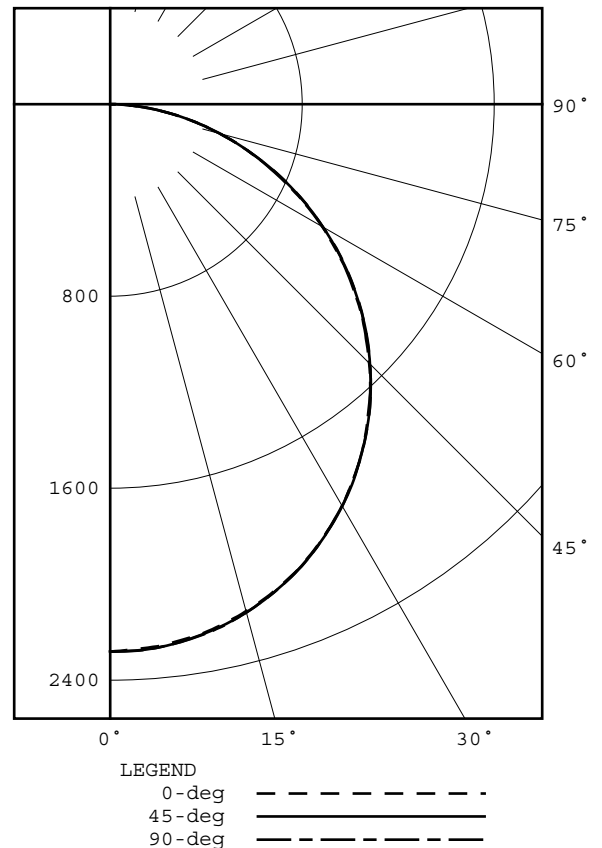
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CANDELA DISTRIBUTION						FLUX
	0.0	22.5	45.0	67.5	90.0	
0	2281	2281	2281	2281	2281	
5	2267	2271	2273	2272	2273	216
15	2187	2192	2192	2192	2192	618
25	2034	2038	2037	2036	2037	939
35	1813	1816	1812	1813	1812	1134
45	1531	1534	1531	1530	1526	1181
55	1204	1203	1203	1200	1198	1074
65	845	843	840	840	835	832
75	475	475	472	473	470	501
85	135	135	132	134	131	151
90	0	0	0	0	0	

ZONAL LUMEN SUMMARY		
ZONE	LUMENS	%FIXT
0- 30	1773	26.7
0- 40	2907	43.7
0- 60	5162	77.7
0- 90	6646	100.0
90-180	0	0.0
0-180	6646	100.0

EFFICACY = 89.3 lm/W
 CIE TYPE - DIRECT
 PLANE : 0-DEG 90-DEG
 SPACING CRITERIA : 1.26 1.26
 BEAM ANGLE (50%) : 113.7 X 113.2 DEGREES
 FIELD ANGLE (10%) : 164.1 X 164.1 DEGREES
 LUMINOUS LENGTH : 47.250 23.250

LUMINANCE DATA IN CANDELA/SQ M			
ANGLE IN DEG	AVERAGE 0-DEG	AVERAGE 45-DEG	AVERAGE 90-DEG
45	3055.	3055.	3045.
55	2962.	2959.	2947.
65	2821.	2804.	2788.
75	2589.	2573.	2562.
85	2185.	2137.	2121.





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

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CANDELA DISTRIBUTION
LATERAL ANGLE

	0.0	22.5	45.0	67.5	90.0
0.0	2281	2281	2281	2281	2281
2.5	2273	2278	2279	2279	2280
5.0	2267	2271	2273	2272	2273
7.5	2253	2258	2259	2259	2260
10.0	2237	2241	2241	2242	2243
12.5	2214	2219	2219	2219	2221
15.0	2187	2192	2192	2192	2192
17.5	2156	2160	2160	2160	2160
20.0	2120	2124	2123	2123	2124
22.5	2081	2083	2083	2083	2084
25.0	2034	2038	2037	2036	2037
27.5	1986	1989	1987	1986	1985
30.0	1934	1935	1933	1932	1932
32.5	1873	1878	1877	1874	1873
35.0	1813	1816	1812	1813	1812
37.5	1748	1752	1748	1747	1745
40.0	1680	1683	1679	1676	1674
42.5	1607	1609	1607	1605	1604
45.0	1531	1534	1531	1530	1526
47.5	1452	1458	1455	1451	1446
50.0	1374	1377	1371	1370	1367
52.5	1291	1292	1288	1284	1282
55.0	1204	1203	1203	1200	1198
57.5	1118	1117	1114	1112	1108
60.0	1023	1028	1024	1020	1020
62.5	935	936	934	930	928
65.0	845	843	840	840	835
67.5	750	751	749	747	741
70.0	654	658	656	655	652
72.5	564	568	565	564	563
75.0	475	475	472	473	470
77.5	384	383	385	383	383
80.0	296	299	298	298	298
82.5	213	215	214	214	212
85.0	135	135	132	134	131
87.5	62	61	60	60	59
90.0	0	0	0	0	0



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

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5-DEGREE
ZONAL LUMEN SUMMARY

0- 5	54
5- 10	161
10- 15	263
15- 20	356
20- 25	436
25- 30	502
30- 35	552
35- 40	583
40- 45	594
45- 50	587
50- 55	559
55- 60	514
60- 65	453
65- 70	379
70- 75	295
75- 80	206
80- 85	117
85- 90	35

10-DEGREE
ZONAL LUMEN SUMMARY

0- 10	216
0- 20	834
0- 30	1773
0- 40	2907
0- 50	4088
0- 60	5162
0- 70	5994
0- 80	6495
0- 90	6646



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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	119	119	119	119	116	116	116	116	111	111	111	111	106	106	106	102	102	102	100
1	108	103	99	95	106	101	97	94	97	94	91	93	90	88	89	87	85	83	83
2	98	90	83	77	96	88	82	76	84	79	74	81	77	73	78	74	71	69	69
3	90	79	70	64	87	77	69	63	74	68	62	71	66	61	69	64	60	58	58
4	82	70	61	54	80	68	60	54	66	59	53	63	57	52	61	56	51	49	49
5	75	62	53	46	73	61	52	46	59	51	46	57	50	45	55	49	45	42	42
6	69	56	47	40	68	55	46	40	53	46	40	51	45	39	50	44	39	37	37
7	64	51	42	36	63	50	41	35	48	41	35	47	40	35	45	39	35	33	33
8	60	46	38	32	58	46	37	32	44	37	31	43	36	31	42	36	31	29	29
9	56	42	34	29	55	42	34	28	41	33	28	40	33	28	39	32	28	26	26
10	52	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	25	24	24

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.

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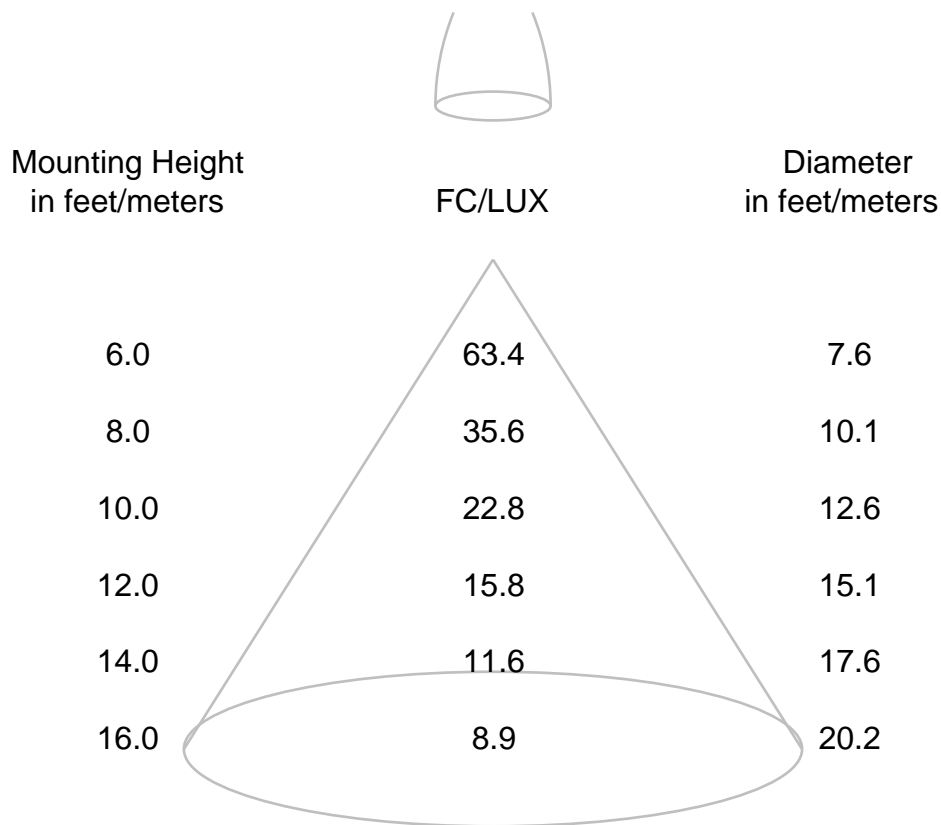
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CONE OF LIGHT DIAGRAM

(diameter shown is where fc/lux value is half the fc/lux at nadir)



If distances are feet, results are footcandles.
If distances are meters, results are lux.

Note: The candela values used to generate this diagram were obtained by averaging the photometric data into a single plane.