

REPORT NUMBER: ITL91975-GONIOPHOTOMETRY

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ISSUE DATE: 07/01/19

PREPARED FOR: LUMOS LIGHTING

ADDRESS: 2385 S DELAWARE STREET
DENVER, CO 80223

CATALOG NUMBER: DNL-M

LUMINAIRE: BOTTOM OPTICAL COMPARTMENT CONSISTS OF: EXTRUDED BLACK FINISHED FINNED METAL HEAT SINK, 1 CIRCUIT BOARD WITH ONE LED, MOLDED MULTI-FACETED SPECULAR PLASTIC BOTTOM REFLECTOR. OPEN BOTTOM.

INPUT ELECTRICAL: 120.0 VOLTS, 16.7 WATTS, 0.140 AMPS
ENERGIZED FOR THIS TEST.

MOUNTING: PENDANT

LED DRIVER: AC ELECTRONICS AC-40CD1.4APMZ, DRIVER HAS MULTIPLE LEADS, ONLY LINE INPUT AND LED OUTPUT LEADS CONNECTED FOR THIS TEST. CLIENT STATES DRIVER PROGRAMMED FOR 400mA OUTPUT.

NOTE: DATA SHOWN IS ABSOLUTE FOR THE SAMPLE PROVIDED AT RATED INPUT VOLTAGE (120VAC, 60Hz) TO THE DRIVER. DUE TO THE SIZE OF THE LUMINAIRE AND GONIOPHOTOMETER SIZE LIMITATIONS, THIS TEST WAS PERFORMED WITH THE LIGHT OPENING 21" BELOW THE PHOTOMETRIC CENTER OF THE GONIOPHOTOMETER. THE DATA WAS MATHEMATICALLY CORRECTED SO THAT THE DISTRIBUTION REPORTED REPRESENTS THE PERFORMANCE WITH THE PHOTOMETRIC CENTER AT THE BOTTOM LIGHT OPENING.

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 R BERGIN

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CANDELA DISTRIBUTION

	0.0	22.5	45.0	67.5	90.0
0	2317	2317	2317	2317	2317
5	2320	2322	2323	2325	2328
15	1974	1970	1974	1966	1970
25	1136	1135	1139	1131	1128
35	570	573	576	573	568
45	115	116	118	119	117
55	4	5	6	6	5
65	1	2	2	2	2
75	0	0	0	0	0
85	0	0	0	0	0
90	0	0	0	0	0

FLUX

218
541
528
354
103
6
2
0
0

ZONAL LUMEN SUMMARY

ZONE	LUMENS	%FIXT
0- 30	1287	73.5
0- 40	1641	93.6
0- 60	1750	99.9
0- 90	1752	100.0
90-180	0	0.0
0-180	1752	100.0

EFFICACY = 104.9 lm/W

CIE TYPE - DIRECT

PLANE : 0-DEG 90-DEG

SPACING CRITERIA : 0.79 0.78

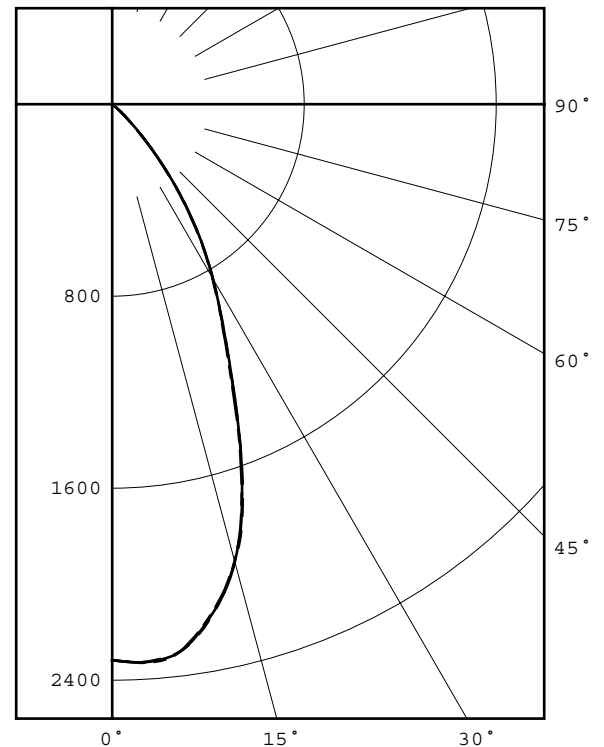
BEAM ANGLE (50%) : 49.3 X 49.1 DEGREES

FIELD ANGLE (10%) : 83.7 X 83.7 DEGREES

LUMINOUS DIAMETER: 2.500

LUMINANCE DATA IN CANDELA/SQ M

ANGLE IN DEG	AVERAGE 0-DEG	AVERAGE 45-DEG	AVERAGE 90-DEG
45	51354.	52694.	52247.
55	2202.	3303.	2753.
65	747.	1494.	1494.
75	0.	0.	0.
85	0.	0.	0.



LEGEND

0-deg	-----
45-deg	-----
90-deg	-----



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CANDELA DISTRIBUTION
LATERAL ANGLE

	0.0	22.5	45.0	67.5	90.0
0.0	2317	2317	2317	2317	2317
2.5	2327	2329	2328	2329	2329
5.0	2320	2322	2323	2325	2328
7.5	2290	2289	2289	2286	2286
10.0	2212	2210	2207	2205	2202
12.5	2107	2108	2107	2107	2101
15.0	1974	1970	1974	1966	1970
17.5	1803	1794	1793	1789	1790
20.0	1575	1578	1572	1572	1563
22.5	1337	1344	1340	1338	1328
25.0	1136	1135	1139	1131	1128
27.5	974	972	978	971	972
30.0	833	837	838	839	841
32.5	703	708	707	708	708
35.0	570	573	576	573	568
37.5	434	435	442	439	439
40.0	312	312	313	314	315
42.5	204	204	203	206	204
45.0	115	116	118	119	117
47.5	59	57	61	60	62
50.0	19	20	22	23	23
52.5	4	5	7	8	8
55.0	4	5	6	6	5
57.5	3	4	5	5	4
60.0	3	3	4	4	3
62.5	2	2	3	3	2
65.0	1	2	2	2	2
67.5	1	1	1	1	1
70.0	0	0	1	1	0
72.5	0	0	0	0	0
75.0	0	0	0	0	0
77.5	0	0	0	0	0
80.0	0	0	0	0	0
82.5	0	0	0	0	0
85.0	0	0	0	0	0
87.5	0	0	0	0	0
90.0	0	0	0	0	0



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5-DEGREE		
ZONAL LUMEN SUMMARY		
0- 5		56
5- 10		163
10- 15		248
15- 20		293
20- 25		281
25- 30		247
30- 35		207
35- 40		146
40- 45		77
45- 50		26
50- 55		4
55- 60		2
60- 65		1
65- 70		1
70- 75		0
75- 80		0
80- 85		0
85- 90		0

10-DEGREE		
ZONAL LUMEN SUMMARY		
0- 10		218
0- 20		759
0- 30		1287
0- 40		1641
0- 50		1744
0- 60		1750
0- 70		1752
0- 80		1752
0- 90		1752



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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	106	106	106	102	102	102	100
1	114	111	109	107	111	109	107	105	105	103	102	101	100	99	98	97	96	94
2	108	104	100	97	106	102	98	95	99	96	93	96	93	91	93	91	89	88
3	103	97	92	88	101	96	91	88	93	89	86	91	88	85	88	86	84	82
4	98	91	86	82	96	90	85	81	88	83	80	86	82	79	84	81	78	77
5	93	85	80	76	92	84	79	75	83	78	75	81	77	74	80	76	73	72
6	89	80	75	71	88	80	74	70	78	73	70	77	73	69	75	72	69	67
7	85	76	70	66	83	75	70	66	74	69	65	73	68	65	72	68	65	63
8	81	72	66	62	80	71	66	62	70	65	62	69	65	61	68	64	61	60
9	77	68	62	58	76	67	62	58	66	62	58	66	61	58	65	61	58	56
10	74	64	59	55	73	64	59	55	63	58	55	62	58	55	62	58	55	53

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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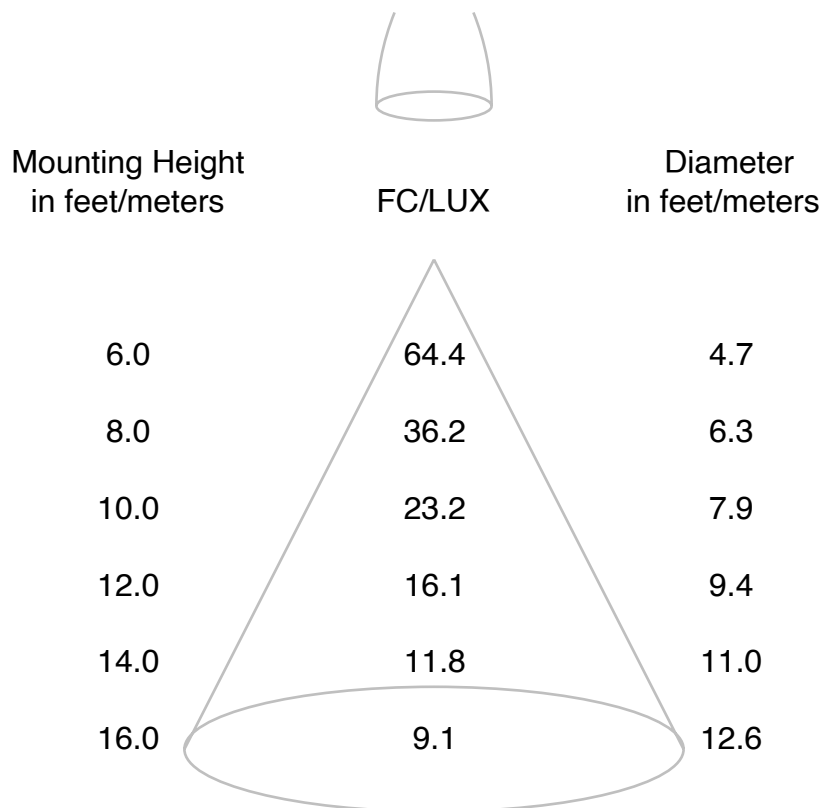
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CONE OF LIGHT DIAGRAM

(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.