

Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P645107

Luminaire Tested: OMN4DIP-SR4F0-75D150U940-BBMOOB-1DUDD-WW

Issue Date: 9/2/2020



Test Information

Test Method: LM-79-2019
Report Number: P645107
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2203-563-26, G2-2206-689-23)
Test Lab: INNOVATION CENTER
Issue Date: 9/2/2020
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: OMN4DIP-SR4F0-75D150U940-BBMOOB-1DUDD-WW
Description: NEO-RAY CIRQUE 4-INCH DIAMETER LINEAR LED LUMINAIRE
DOWNLIGHT - BLACK BAFFLE WITH MEDIUM OPTIC - 750 LUMENS PER FOOT
UPLIGHT - BATWING OPTIC - 1500 LUMENS PER FOOT
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

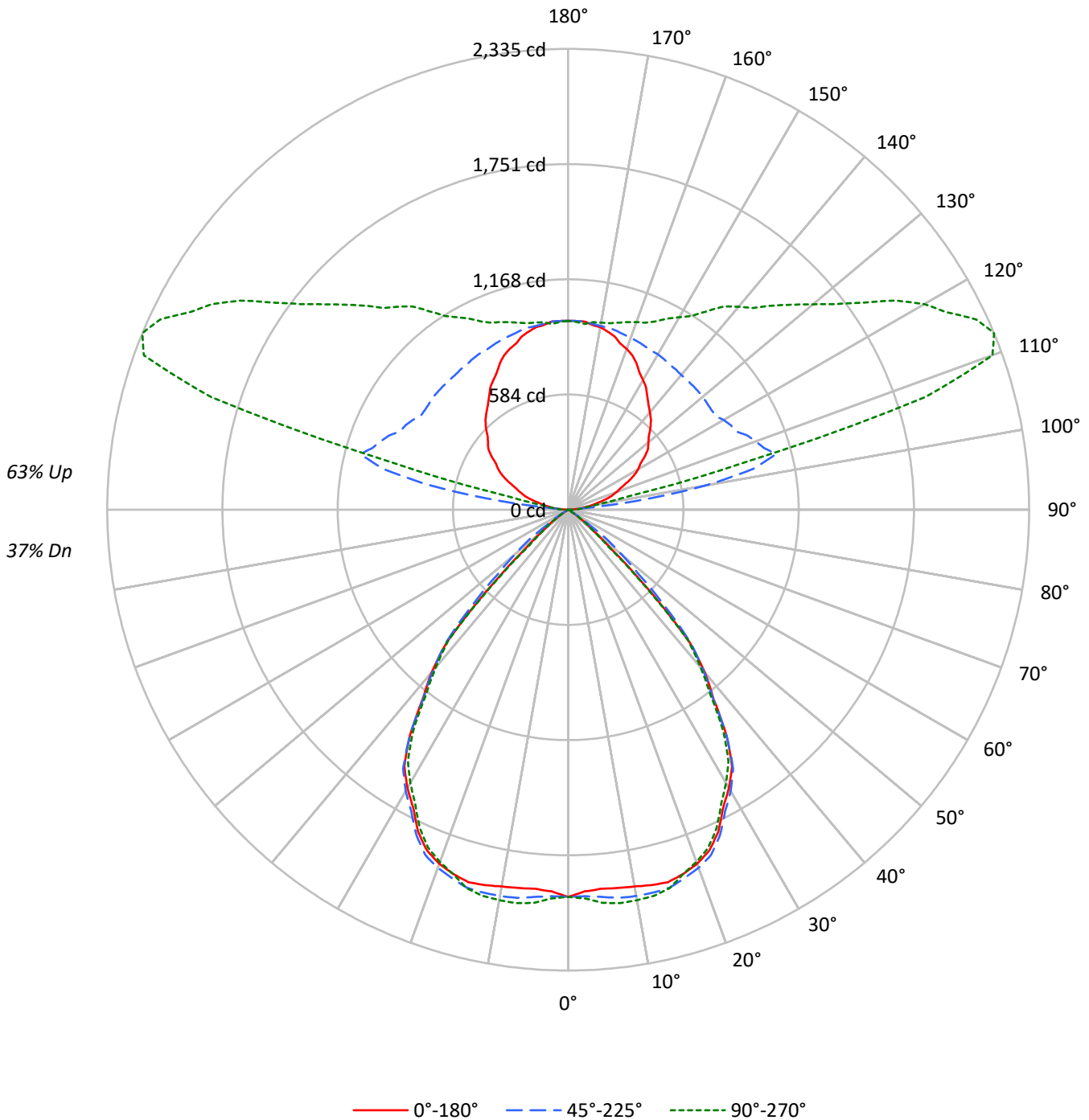
Lumens per Lamp: N/A
Luminaire Lumens: 8155.3 lumens
Efficiency: N/A
Efficacy: 106.6 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.21 / 1.18
Luminous Opening: Rectangular (W 0.21' x L: 4' x H: 0')
CIE Type: Semi-Indirect

Input Watts (W): 76.5
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				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
RCR																				
0	104	104	104	104	94	94	94	94	76	76	76		59	59	59		44	44	44	37
1	96	93	89	86	87	84	82	79	69	67	65		54	53	52		41	41	40	34
2	89	83	77	73	81	75	71	67	62	59	56		50	48	46		38	37	36	31
3	82	74	68	63	75	68	63	58	56	52	49		45	43	41		35	34	33	28
4	76	67	60	54	69	61	55	51	51	47	43		41	39	36		33	31	29	26
5	70	60	53	48	64	55	49	45	46	42	38		38	35	33		30	28	27	23
6	65	54	47	42	59	50	44	39	42	38	34		35	32	29		28	26	24	21
7	61	50	42	37	55	46	40	35	39	34	31		32	29	26		26	24	22	20
8	56	45	38	34	52	42	36	32	36	31	28		30	26	24		24	22	20	18
9	53	42	35	30	48	39	33	28	33	28	25		28	24	22		22	20	19	17
10	49	38	32	27	45	36	30	26	30	26	23		26	22	20		21	19	17	15

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	25336	25336	25336
5°	24996	25533	25930
10°	25425	26068	26350
15°	26127	26516	26558
20°	26246	26542	26099
25°	25642	25926	25359
30°	24277	24551	23843
35°	22068	22068	21611
40°	18151	17969	17583
45°	10852	12754	10350
50°	3509	7108	3292
55°	1241	2380	1241
60°	80	672	39
65°	46	46	0
70°	57	0	0
75°	0	0	0
80°	0	0	0
85°	222	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 12754 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	188.7	2.3
10°-20°	558.4	6.8
20°-30°	826.3	10.1
30°-40°	854.1	10.5
40°-50°	497.0	6.1
50°-60°	84.2	1.0
60°-70°	3.3	0.0
70°-80°	0.5	0.0
80°-90°	2.6	0.0
90°-100°	117.7	1.4
100°-110°	838.3	10.3
110°-120°	1138.2	14.0
120°-130°	926.4	11.4
130°-140°	745.1	9.1
140°-150°	587.4	7.2
150°-160°	429.5	5.3
160°-170°	266.8	3.3
170°-180°	91.0	1.1
0°-30°	1573.4	19.3
0°-40°	2427.5	29.8
0°-60°	3008.7	36.9
0°-90°	3015.1	37.0
90°-120°	2094.2	25.7
90°-150°	4353.0	53.4
90°-180°	5140.0	63.0
0°-180°	8155.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1962	1962	1962	1962	1962	
5°	1928	1979	1969	1974	2000	185
15°	1954	2023	1983	1972	1986	550
25°	1799	1859	1819	1764	1779	822
35°	1400	1422	1400	1364	1370	857
45°	594	691	698	674	567	459
55°	55	64	106	60	55	61
65°	2	2	2	0	0	2
75°	0	2	0	0	0	1
85°	2	2	0	0	0	1
90°	0	6	12	18	18	2
95°	48	89	48	54	66	54
105°	187	287	1089	1392	921	197
115°	331	402	939	1951	2281	329
125°	475	540	885	1547	1830	422
135°	590	654	891	1274	1462	454
145°	698	757	897	1110	1228	438
155°	818	848	915	1006	1053	376
165°	909	920	939	963	981	255
175°	957	963	957	951	945	90
180°	957	957	957	957	957	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1961.5	1961.5	1961.5	1961.5	1961.5
2.5°	1935.8	1974.1	1960.3	1961.7	1971.3
5°	1927.8	1978.7	1969.2	1974.3	1999.8
7.5°	1933.6	1985.1	1983.9	1985.3	2010.2
10°	1938.5	1992.4	1987.5	1986.5	2009.0
12.5°	1948.3	2007.0	1987.5	1985.2	2004.1
15°	1953.8	2022.7	1982.9	1972.5	1986.0
17.5°	1935.2	2011.8	1957.8	1930.1	1935.5
20°	1909.4	1987.3	1930.9	1889.7	1898.7
22.5°	1869.0	1943.3	1892.9	1842.0	1853.4
25°	1799.2	1859.1	1819.1	1764.3	1779.3
27.5°	1700.0	1747.3	1722.0	1668.9	1678.2
30°	1627.7	1666.6	1646.1	1594.1	1598.6
32.5°	1544.4	1577.3	1555.4	1510.7	1510.4
35°	1399.5	1422.0	1399.5	1364.5	1370.5
37.5°	1210.0	1227.0	1204.2	1183.1	1186.1
40°	1076.5	1089.9	1065.7	1045.8	1042.8
42.5°	909.9	947.3	923.6	896.5	900.7
45°	594.1	691.4	698.2	674.4	566.6
47.5°	299.5	405.8	486.0	368.8	264.3
50°	174.6	238.9	353.7	195.3	163.8
52.5°	114.5	141.8	247.1	123.4	108.7
55°	55.1	64.1	105.7	59.6	55.1
57.5°	19.0	29.2	46.9	29.8	21.1
60°	3.1	12.0	26.0	9.0	1.5
62.5°	1.8	3.6	16.2	1.8	0.3
65°	1.5	1.5	1.5	0.0	0.0
67.5°	1.5	1.5	0.0	0.0	0.0
70°	1.5	1.5	0.0	0.0	0.0
72.5°	1.5	1.5	0.0	0.0	0.0
75°	0.0	1.5	0.0	0.0	0.0
77.5°	0.0	1.5	0.0	0.0	0.0
80°	0.0	1.5	0.0	0.0	0.0
82.5°	0.0	1.5	0.0	0.0	0.0
85°	1.5	1.5	0.0	0.0	0.0
87.5°	1.2	2.4	2.4	3.6	3.6
90°	0.0	5.9	12.0	18.1	18.1
92.5°	14.4	20.3	26.5	37.4	42.1
95°	48.1	89.3	48.1	54.4	66.2
97.5°	85.5	171.4	353.9	104.4	90.3
100°	114.3	214.4	710.2	209.0	138.4
102.5°	143.2	248.0	960.5	551.6	302.1
105°	186.6	286.6	1089.3	1391.5	920.8
107.5°	229.9	305.2	1039.9	2025.2	1896.9
110°	258.8	329.4	1011.1	2128.0	2286.9



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	287.7	358.3	982.2	2067.9	2335.1
115°	331.0	401.6	938.8	1951.4	2280.9
117.5°	375.5	445.0	928.0	1825.2	2164.2
120°	409.2	474.0	908.8	1729.2	2082.3
122.5°	433.3	502.7	884.7	1646.7	1971.6
125°	475.4	540.2	884.7	1547.1	1829.5
127.5°	510.3	576.3	885.9	1431.5	1710.4
130°	529.6	600.2	890.7	1354.1	1618.9
132.5°	553.7	624.3	890.7	1319.3	1537.1
135°	589.8	654.5	890.7	1274.1	1462.4
137.5°	619.9	689.3	890.7	1224.2	1385.4
140°	643.9	708.7	890.7	1195.0	1342.1
142.5°	668.0	728.0	895.5	1161.0	1298.7
145°	698.1	757.0	896.7	1110.0	1227.7
147.5°	734.2	786.0	903.9	1073.3	1163.9
150°	758.3	805.4	908.8	1048.9	1125.4
152.5°	782.4	824.7	908.8	1029.3	1091.7
155°	818.5	847.9	914.8	1006.1	1053.2
157.5°	847.4	875.6	922.0	991.4	1025.5
160°	866.6	890.2	926.8	981.6	1011.1
162.5°	881.1	904.6	931.6	976.6	996.6
165°	908.8	920.5	938.8	963.3	981.0
167.5°	924.4	935.0	944.9	957.1	967.7
170°	938.8	944.7	944.9	957.0	962.9
172.5°	943.7	954.2	949.7	952.2	958.1
175°	956.9	962.8	956.9	950.7	944.9
177.5°	956.9	961.6	956.9	956.8	952.1
180°	956.9	956.9	956.9	956.9	956.9

(END OF REPORT)