

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: P645197

Luminaire Tested: OMN4DIP-SR4F0-75D75U940-BBMOOB-1DUDD-WW

Issue Date: 9/2/2020



Test Information

Test Method: LM-79-2019
Report Number: P645197
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-SR4F0-75D75U940-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 - 750 LUMENS PER FOOT
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

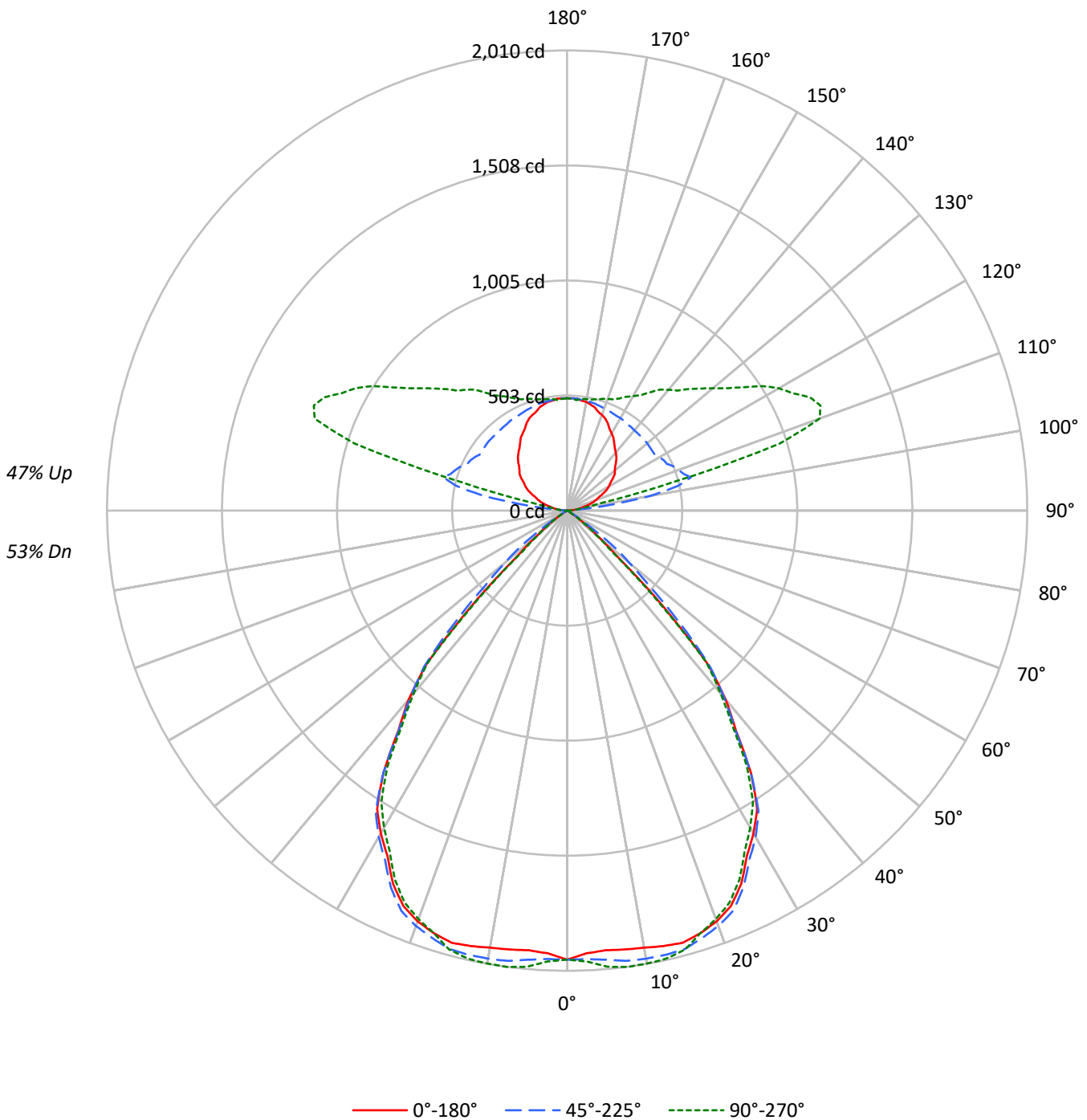
Lumens per Lamp: N/A
Luminaire Lumens: 5651.2 lumens
Efficiency: N/A
Efficacy: 116.0 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.21 / 1.18
Luminous Opening: Rectangular (W 0.21' x L: 4' x H: 0')
CIE Type: General Diffuse

Input Watts (W): 48.7
Input Voltage (V): 120
Input Current (Ain): 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	50	30	10	0	
RCR																						
0	108	108	108	108	100	100	100	100	85	85	85	72	72	72	59	59	59	53				
1	101	97	94	91	93	90	88	85	78	76	74	66	65	64	56	55	54	49				
2	93	87	82	78	87	82	77	74	71	68	65	61	59	57	52	50	49	45				
3	87	79	73	68	81	74	69	64	65	61	57	56	53	51	48	46	44	41				
4	81	71	65	60	75	67	61	57	59	55	51	51	48	46	44	42	40	37				
5	75	65	58	53	70	61	55	50	54	49	46	47	44	41	41	39	37	34				
6	70	59	52	47	65	56	50	45	50	45	41	44	40	37	38	35	33	31				
7	65	54	47	42	61	51	45	40	46	41	37	40	37	34	35	33	31	28				
8	61	50	43	38	57	47	41	37	42	37	34	37	34	31	33	30	28	26				
9	57	46	39	34	53	43	37	33	39	34	31	35	31	28	31	28	26	24				
10	53	42	36	31	50	40	34	30	36	31	28	32	29	26	29	26	24	22				

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	3.3
10°-20°	558.4	9.9
20°-30°	826.3	14.6
30°-40°	854.1	15.1
40°-50°	497.0	8.8
50°-60°	84.2	1.5
60°-70°	3.3	0.1
70°-80°	0.5	0.0
80°-90°	1.5	0.0
90°-100°	60.4	1.1
100°-110°	430.1	7.6
110°-120°	583.9	10.3
120°-130°	475.3	8.4
130°-140°	382.3	6.8
140°-150°	301.4	5.3
150°-160°	220.3	3.9
160°-170°	136.9	2.4
170°-180°	46.7	0.8
0°-30°	1573.4	27.8
0°-40°	2427.5	43.0
0°-60°	3008.7	53.2
0°-90°	3014.0	53.3
90°-120°	1074.4	19.0
90°-150°	2233.3	39.5
90°-180°	2637.0	46.7
0°-180°	5651.2	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	3	6	9	9	1
95°	25	46	25	28	34	28
105°	96	147	559	714	472	101
115°	170	206	482	1001	1170	169
125°	244	277	454	794	939	217
135°	303	336	457	654	750	233
145°	358	388	460	570	630	225
155°	420	435	469	516	540	193
165°	466	472	482	494	503	131
175°	491	494	491	488	485	46
180°	491	491	491	491	491	



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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	1.8	1.2	1.9	1.9
90°	0.0	3.0	6.2	9.3	9.3
92.5°	7.4	10.4	13.6	19.2	21.6
95°	24.7	45.8	24.7	27.9	34.0
97.5°	43.8	87.9	181.6	53.6	46.3
100°	58.7	110.0	364.3	107.2	71.0
102.5°	73.5	127.2	492.8	283.0	155.0
105°	95.7	147.0	558.9	713.9	472.4
107.5°	117.9	156.6	533.5	1039.0	973.2
110°	132.8	169.0	518.7	1091.8	1173.3



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	147.6	183.8	503.9	1060.9	1198.0
115°	169.8	206.0	481.7	1001.2	1170.2
117.5°	192.7	228.3	476.1	936.4	1110.3
120°	210.0	243.2	466.2	887.2	1068.3
122.5°	222.3	257.9	453.9	844.9	1011.5
125°	243.9	277.1	453.9	793.7	938.6
127.5°	261.8	295.6	454.5	734.4	877.5
130°	271.7	307.9	457.0	694.7	830.6
132.5°	284.1	320.3	457.0	676.9	788.6
135°	302.6	335.8	457.0	653.7	750.3
137.5°	318.0	353.7	457.0	628.1	710.8
140°	330.4	363.6	457.0	613.1	688.5
142.5°	342.7	373.5	459.4	595.7	666.3
145°	358.2	388.4	460.1	569.5	629.9
147.5°	376.7	403.3	463.8	550.7	597.2
150°	389.0	413.2	466.2	538.1	577.4
152.5°	401.4	423.1	466.2	528.1	560.1
155°	419.9	435.0	469.3	516.2	540.3
157.5°	434.7	449.2	473.0	508.6	526.1
160°	444.6	456.7	475.5	503.6	518.7
162.5°	452.0	464.1	478.0	501.0	511.3
165°	466.2	472.3	481.7	494.2	503.3
167.5°	474.3	479.7	484.8	491.1	496.5
170°	481.7	484.7	484.8	491.0	494.0
172.5°	484.1	489.6	487.2	488.5	491.6
175°	490.9	494.0	490.9	487.8	484.8
177.5°	490.9	493.4	490.9	490.9	488.5
180°	490.9	490.9	490.9	490.9	490.9

(END OF REPORT)