

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: P645106

Luminaire Tested: OMN4DIP-SR4F0-75D150U935-WBMOOB-1DUDD-WW

Issue Date: 9/2/2020



Test Information

Test Method: LM-79-2019
Report Number: P645106
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2203-563-26, G2-2206-689-27)
Test Lab: INNOVATION CENTER
Issue Date: 9/2/2020
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: OMN4DIP-SR4F0-75D150U935-WBMOOB-1DUDD-WW
Description: NEO-RAY CIRQUE 4-INCH DIAMETER LINEAR LED LUMINAIRE
DOWNLIGHT - WHITE BAFFLE WITH MEDIUM OPTIC - 750 LUMENS PER FOOT
UPLIGHT - BATWING OPTIC - 1500 LUMENS PER FOOT
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

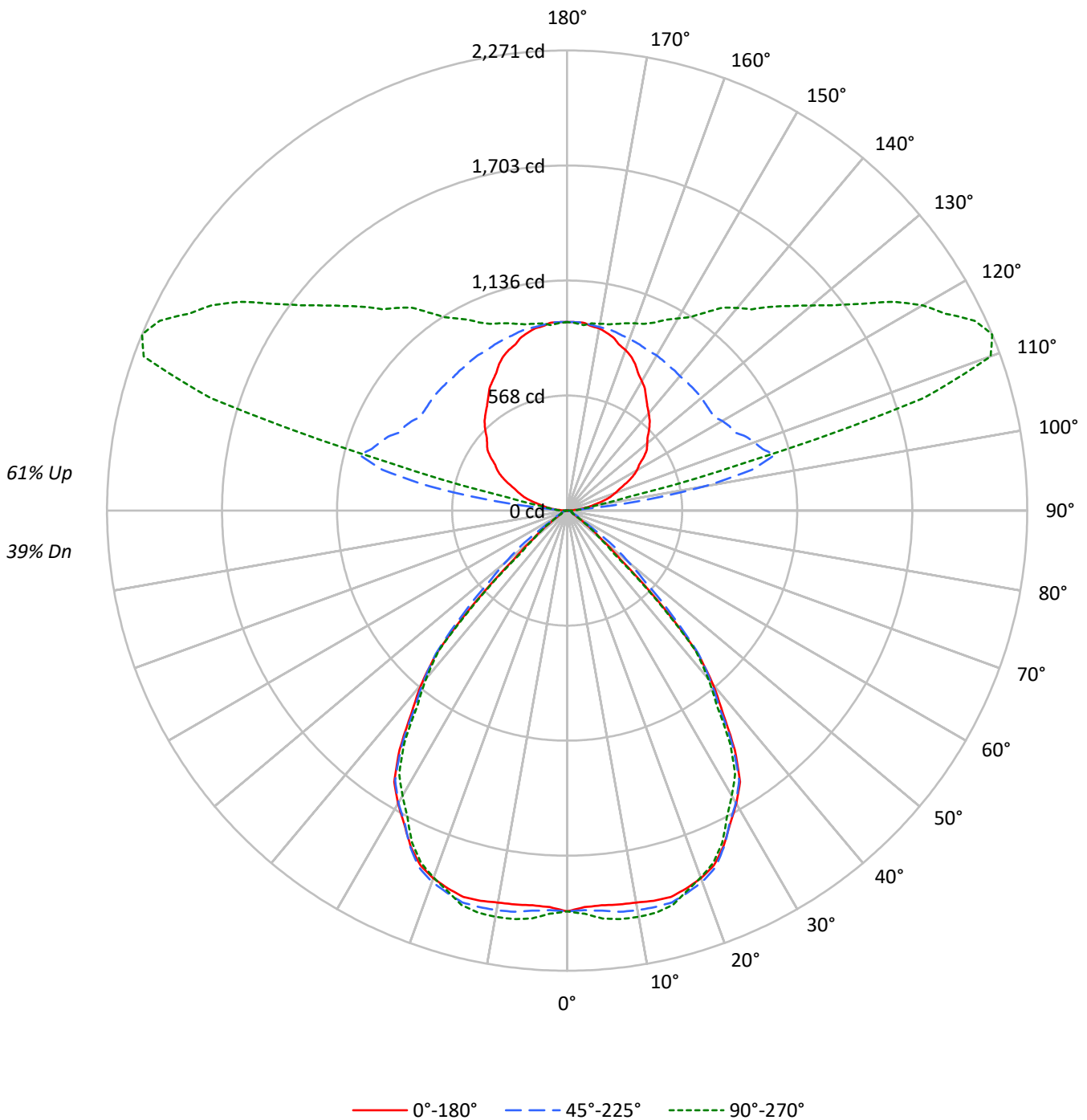
Lumens per Lamp: N/A
Luminaire Lumens: 8181.1 lumens
Efficiency: N/A
Efficacy: 106.9 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.21 / 1.19
Luminous Opening: Rectangular (W 0.21' x L: 4' x H: 0')
CIE Type: Semi-Indirect

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	50	30	10	0	
RCR																						
0	104	104	104	104	95	95	95	95	77	77	77	61	61	61	46	46	46	39				
1	97	93	90	87	88	85	82	80	70	68	66	56	54	53	43	42	41	36				
2	89	83	78	73	81	76	71	68	63	60	57	51	49	47	39	38	37	32				
3	82	74	68	63	75	68	63	58	57	53	50	46	44	41	36	35	33	29				
4	76	67	60	54	69	61	55	51	51	47	44	42	39	37	33	32	30	26				
5	70	60	53	48	64	55	49	45	47	42	39	39	35	33	31	29	27	24				
6	65	54	47	42	60	50	44	39	43	38	34	35	32	30	29	26	25	22				
7	61	50	42	37	55	46	40	35	39	34	31	33	29	27	26	24	23	20				
8	56	45	38	33	52	42	36	32	36	31	28	30	27	24	25	22	21	18				
9	53	42	35	30	48	39	33	28	33	28	25	28	24	22	23	21	19	17				
10	49	38	32	27	45	36	30	26	31	26	23	26	23	20	21	19	17	15				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	25544	25544	25544
5°	25353	25700	26202
10°	25762	26270	26700
15°	26405	26765	26944
20°	26550	26794	26488
25°	26041	26105	25786
30°	24899	24832	24232
35°	22730	22543	22073
40°	18883	18607	18254
45°	11861	13492	11316
50°	4549	7990	4220
55°	2146	3353	2180
60°	1039	1692	922
65°	957	1002	865
70°	955	955	842
75°	968	968	818
80°	997	885	774
85°	1097	889	667

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 13492 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	190.5	2.3
10°-20°	563.4	6.9
20°-30°	836.9	10.2
30°-40°	876.0	10.7
40°-50°	530.6	6.5
50°-60°	122.4	1.5
60°-70°	33.6	0.4
70°-80°	19.7	0.2
80°-90°	8.9	0.1
90°-100°	114.4	1.4
100°-110°	815.3	10.0
110°-120°	1106.9	13.5
120°-130°	900.9	11.0
130°-140°	724.6	8.9
140°-150°	571.2	7.0
150°-160°	417.7	5.1
160°-170°	259.4	3.2
170°-180°	88.5	1.1
0°-30°	1590.8	19.4
0°-40°	2466.8	30.2
0°-60°	3119.8	38.1
0°-90°	3182.1	38.9
90°-120°	2036.7	24.9
90°-150°	4233.4	51.7
90°-180°	4999.0	61.1
0°-180°	8181.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1978	1978	1978	1978	1978	
5°	1955	2000	1982	1990	2021	187
15°	1975	2034	2002	1986	2015	556
25°	1827	1881	1832	1785	1809	837
35°	1442	1463	1430	1397	1400	886
45°	649	738	739	713	620	499
55°	95	108	149	103	97	99
65°	31	33	33	30	28	31
75°	19	19	19	18	16	20
85°	7	7	6	6	4	7
90°	0	6	12	18	18	2
95°	47	87	47	53	64	52
105°	181	279	1059	1353	896	191
115°	322	391	913	1898	2218	320
125°	462	525	860	1505	1779	411
135°	574	636	866	1239	1422	441
145°	679	736	872	1080	1194	426
155°	796	825	890	978	1024	365
165°	884	895	913	937	954	248
175°	931	936	931	925	919	88
180°	931	931	931	931	931	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1977.6	1977.6	1977.6	1977.6	1977.6
2.5°	1958.6	1993.5	1974.0	1975.6	1991.9
5°	1955.3	2000.4	1982.1	1990.2	2020.8
7.5°	1960.6	2007.8	1997.0	1999.8	2033.3
10°	1964.2	2013.7	2002.9	2002.2	2035.7
12.5°	1972.6	2024.4	2004.1	1999.8	2032.1
15°	1974.6	2034.3	2001.5	1985.7	2014.9
17.5°	1955.3	2021.1	1976.7	1944.2	1967.5
20°	1931.5	1998.4	1949.3	1903.7	1927.0
22.5°	1894.5	1960.3	1907.6	1858.4	1882.9
25°	1827.2	1881.1	1831.7	1784.6	1809.3
27.5°	1742.0	1779.9	1737.6	1692.9	1706.9
30°	1669.4	1707.2	1664.9	1618.9	1624.7
32.5°	1588.4	1620.4	1579.1	1537.8	1542.5
35°	1441.5	1463.4	1429.6	1396.9	1399.8
37.5°	1262.8	1265.7	1242.9	1213.1	1213.7
40°	1119.9	1128.6	1103.5	1079.7	1082.6
42.5°	949.5	983.9	959.3	937.9	938.5
45°	649.3	738.1	738.6	712.7	619.5
47.5°	358.6	461.4	527.5	409.0	308.9
50°	226.4	291.9	397.6	239.1	210.0
52.5°	162.0	191.4	290.4	169.1	154.0
55°	95.3	108.4	148.9	102.6	96.8
57.5°	58.1	69.4	87.0	68.6	58.4
60°	40.2	50.4	65.5	45.9	35.7
62.5°	35.4	38.6	51.2	36.6	33.4
65°	31.3	32.7	32.8	29.8	28.3
67.5°	27.7	29.2	27.7	26.2	24.7
70°	25.3	26.8	25.3	23.8	22.3
72.5°	22.9	24.4	22.9	21.4	20.0
75°	19.4	19.4	19.4	17.8	16.4
77.5°	15.8	15.8	15.5	14.3	12.8
80°	13.4	13.4	11.9	11.9	10.4
82.5°	11.0	11.0	9.5	9.5	8.0
85°	7.4	7.4	6.0	5.9	4.5
87.5°	3.6	4.7	4.7	5.9	4.7
90°	0.0	5.7	11.7	17.6	17.6
92.5°	14.0	19.8	25.8	36.4	41.0
95°	46.8	86.9	46.8	52.9	64.4
97.5°	83.1	166.7	344.2	101.5	87.8
100°	111.2	208.5	690.6	203.3	134.6
102.5°	139.3	241.2	934.1	536.5	293.8
105°	181.4	278.7	1059.4	1353.3	895.5
107.5°	223.6	296.8	1011.4	1969.6	1844.8
110°	251.7	320.4	983.3	2069.6	2224.1



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	279.8	348.4	955.2	2011.1	2270.9
115°	321.9	390.6	913.1	1897.8	2218.3
117.5°	365.2	432.8	902.5	1775.1	2104.7
120°	398.0	461.0	883.8	1681.7	2025.1
122.5°	421.4	488.9	860.4	1601.5	1917.4
125°	462.4	525.3	860.4	1504.6	1779.3
127.5°	496.3	560.4	861.6	1392.1	1663.4
130°	515.1	583.7	866.2	1316.9	1574.4
132.5°	538.5	607.1	866.2	1283.1	1494.8
135°	573.6	636.5	866.2	1239.1	1422.3
137.5°	602.9	670.4	866.2	1190.5	1347.3
140°	626.3	689.2	866.2	1162.1	1305.2
142.5°	649.7	708.0	870.9	1129.1	1263.1
145°	678.9	736.2	872.1	1079.5	1194.0
147.5°	714.1	764.4	879.1	1043.8	1132.0
150°	737.5	783.3	883.8	1020.1	1094.5
152.5°	760.9	802.1	883.8	1001.1	1061.7
155°	796.0	824.6	889.6	978.5	1024.3
157.5°	824.1	851.6	896.7	964.1	997.3
160°	842.8	865.7	901.4	954.7	983.3
162.5°	856.9	879.8	906.0	949.8	969.2
165°	883.8	895.2	913.1	936.9	954.0
167.5°	899.0	909.3	918.9	930.9	941.2
170°	913.1	918.8	918.9	930.7	936.5
172.5°	917.7	928.0	923.6	926.1	931.8
175°	930.6	936.3	930.6	924.6	918.9
177.5°	930.6	935.2	930.6	930.5	925.9
180°	930.6	930.6	930.6	930.6	930.6

(END OF REPORT)