

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: P645196

Luminaire Tested: OMN4DIP-SR4F0-75D75U935-WBMOOB-1DUDD-WW

Issue Date: 9/2/2020



**Test Information**

Test Method: LM-79-2019  
Report Number: P645196  
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-SR4F0-75D75U935-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 - 750 LUMENS PER FOOT  
Light Source: 3500K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

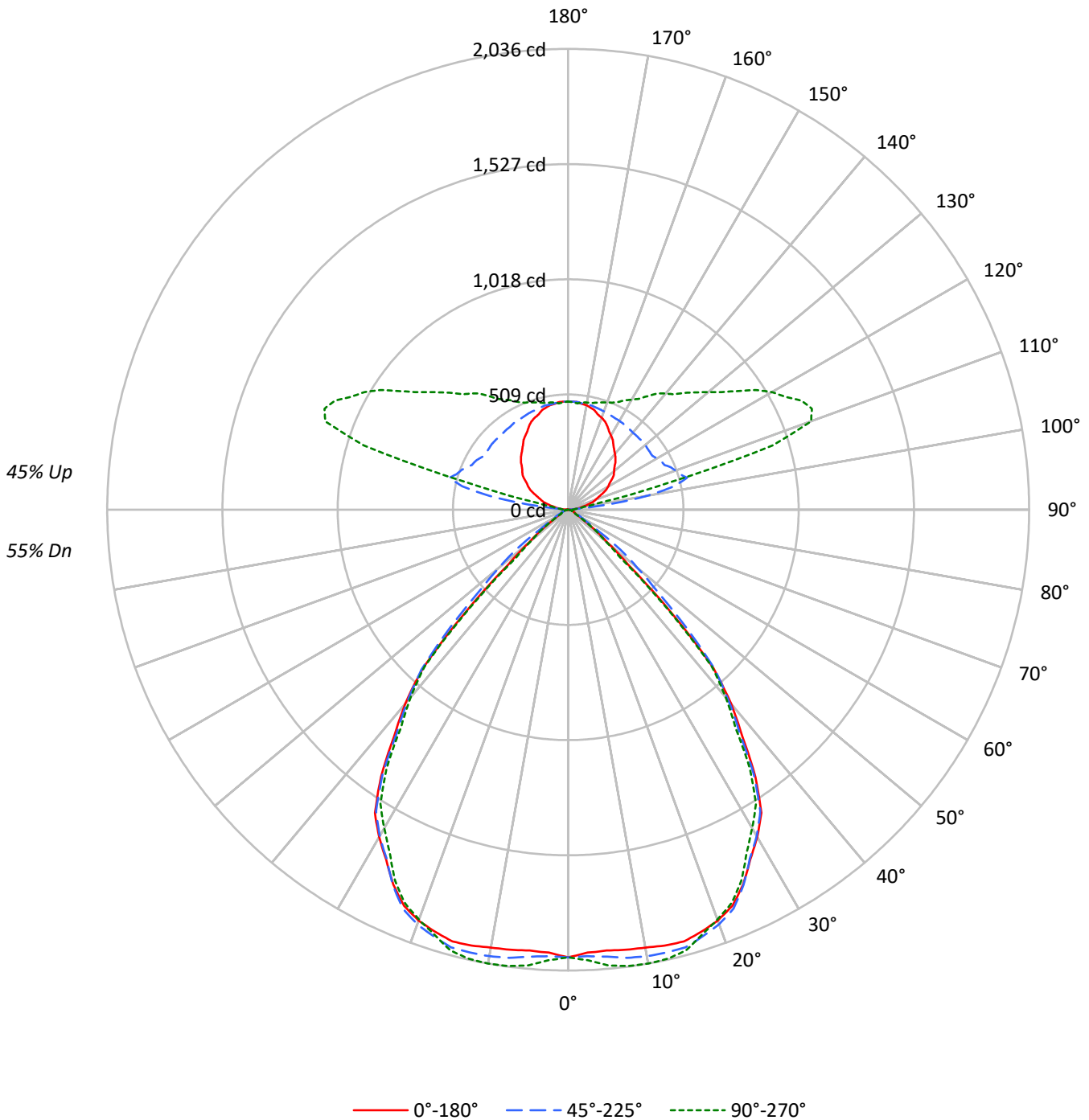
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5745.8 lumens  
Efficiency: N/A  
Efficacy: 118.0 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: 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									
RC	80									70									30									10									0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0													
RCR																																					
0	108	108	108	108	101	101	101	101	86	86	86	73	73	73	61	61	61	55																			
1	101	97	94	91	94	91	88	86	79	77	75	67	66	65	57	56	55	51																			
2	94	87	82	78	87	82	77	74	71	68	65	62	59	57	53	51	50	46																			
3	87	79	73	68	81	74	69	64	65	61	58	57	54	51	49	47	45	41																			
4	81	71	65	59	75	67	61	57	59	55	51	52	49	46	45	43	41	37																			
5	75	65	58	52	70	61	55	50	54	49	46	48	44	41	42	39	37	34																			
6	70	59	52	47	65	56	49	45	50	45	41	44	40	37	39	36	34	31																			
7	65	54	47	42	61	51	45	40	46	41	37	41	37	34	36	33	31	28																			
8	61	50	43	38	57	47	41	36	42	37	34	38	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	33	29	26	29	26	24	22																			

**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	3.3
10°-20°	563.4	9.8
20°-30°	836.9	14.6
30°-40°	876.0	15.2
40°-50°	530.6	9.2
50°-60°	122.4	2.1
60°-70°	33.6	0.6
70°-80°	19.7	0.3
80°-90°	7.9	0.1
90°-100°	58.7	1.0
100°-110°	418.3	7.3
110°-120°	567.9	9.9
120°-130°	462.2	8.0
130°-140°	371.7	6.5
140°-150°	293.1	5.1
150°-160°	214.3	3.7
160°-170°	133.1	2.3
170°-180°	45.4	0.8
0°-30°	1590.8	27.7
0°-40°	2466.8	42.9
0°-60°	3119.8	54.3
0°-90°	3181.1	55.4
90°-120°	1044.9	18.2
90°-150°	2171.9	37.8
90°-180°	2565.0	44.6
0°-180°	5745.8	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	3	6	9	9	1
95°	24	45	24	27	33	27
105°	93	143	544	694	459	98
115°	165	200	468	974	1138	164
125°	237	270	441	772	913	211
135°	294	327	444	636	730	226
145°	348	378	447	554	613	219
155°	408	423	456	502	526	187
165°	453	459	468	481	490	127
175°	478	480	478	474	471	45
180°	478	478	478	478	478	



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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	4.2	3.6	4.2	3.0
90°	0.0	2.9	6.0	9.0	9.0
92.5°	7.2	10.1	13.2	18.7	21.0
95°	24.0	44.6	24.0	27.2	33.0
97.5°	42.6	85.5	176.6	52.1	45.0
100°	57.1	107.0	354.3	104.3	69.1
102.5°	71.5	123.7	479.3	275.2	150.7
105°	93.1	143.0	543.5	694.3	459.4
107.5°	114.7	152.3	518.9	1010.5	946.5
110°	129.1	164.4	504.5	1061.8	1141.1



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	143.5	178.8	490.1	1031.8	1165.1
115°	165.2	200.4	468.4	973.7	1138.1
117.5°	187.4	222.0	463.0	910.7	1079.8
120°	204.2	236.5	453.4	862.8	1039.0
122.5°	216.2	250.9	441.4	821.7	983.7
125°	237.2	269.5	441.4	771.9	912.9
127.5°	254.6	287.5	442.0	714.2	853.4
130°	264.3	299.5	444.4	675.6	807.8
132.5°	276.3	311.5	444.4	658.3	766.9
135°	294.3	326.6	444.4	635.7	729.7
137.5°	309.3	343.9	444.4	610.8	691.3
140°	321.3	353.6	444.4	596.2	669.6
142.5°	333.3	363.3	446.8	579.3	648.0
145°	348.3	377.7	447.4	553.9	612.6
147.5°	366.3	392.2	451.0	535.5	580.8
150°	378.4	401.8	453.4	523.4	561.5
152.5°	390.4	411.5	453.4	513.6	544.7
155°	408.4	423.1	456.4	502.0	525.5
157.5°	422.8	436.9	460.0	494.7	511.7
160°	432.4	444.2	462.4	489.8	504.5
162.5°	439.6	451.4	464.8	487.3	497.3
165°	453.4	459.3	468.4	480.7	489.5
167.5°	461.2	466.5	471.4	477.6	482.9
170°	468.4	471.4	471.4	477.5	480.5
172.5°	470.8	476.1	473.8	475.1	478.1
175°	477.5	480.4	477.5	474.4	471.4
177.5°	477.5	479.8	477.5	477.4	475.1
180°	477.5	477.5	477.5	477.5	477.5

(END OF REPORT)