

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: P644891

Luminaire Tested: OMN4DIP-SR4F0-50D125U935-BBMOOB-1DUDD-WW

Issue Date: 9/2/2020



**Test Information**

Test Method: LM-79-2019  
Report Number: P644891  
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-SR4F0-50D125U935-BBMOOB-1DUDD-WW  
Description: NEO-RAY CIRQUE 4-INCH DIAMETER LINEAR LED LUMINAIRE  
DOWNLIGHT - BLACK BAFFLE WITH MEDIUM OPTIC - 500 LUMENS PER FOOT  
UPLIGHT - BATWING OPTIC - 1250 LUMENS PER FOOT  
Light Source: 3500K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

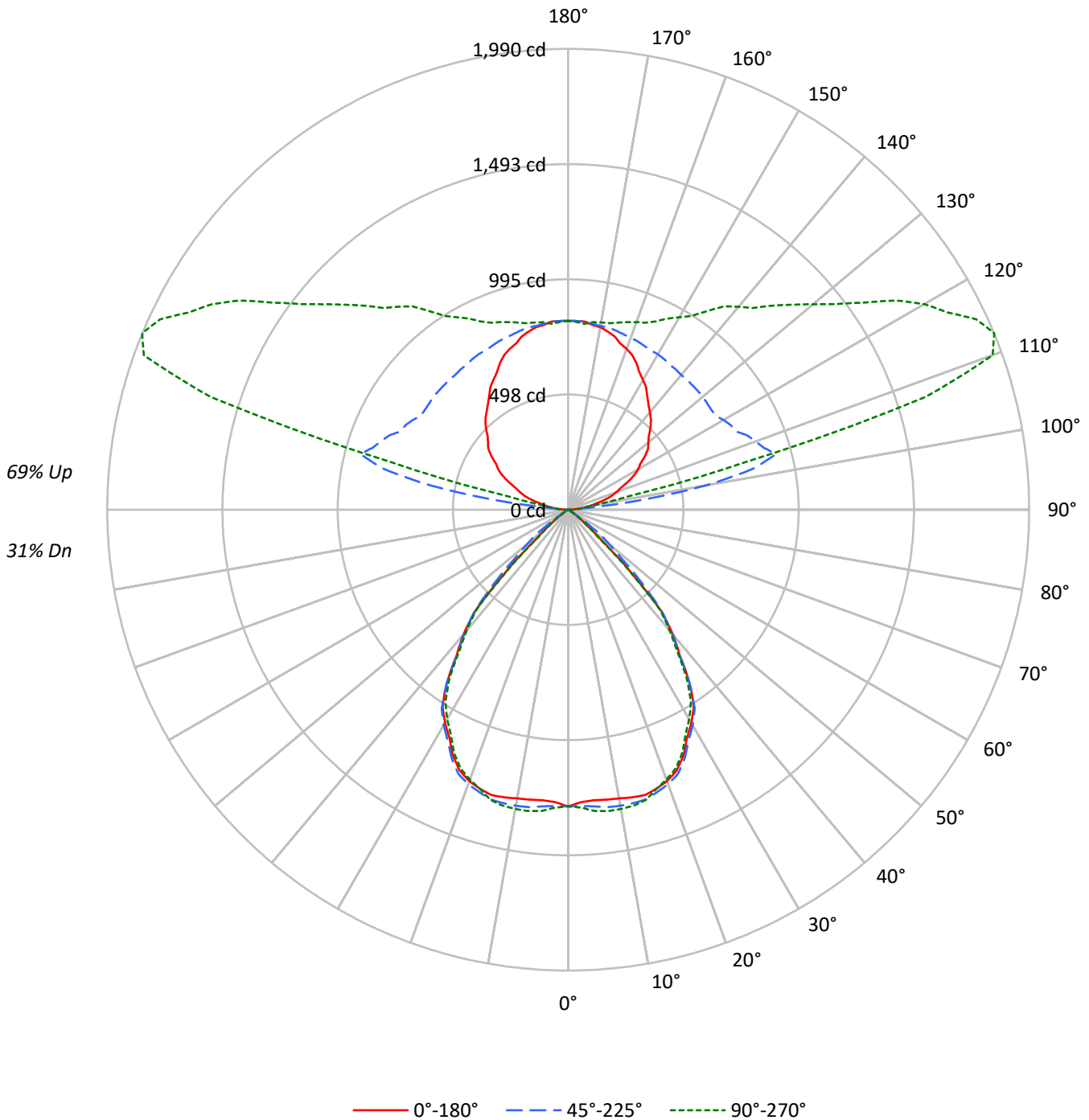
Lumens per Lamp: N/A  
Luminaire Lumens: 6351.1 lumens  
Efficiency: N/A  
Efficacy: 112.6 lumens/watt  
Spacing Criteria (0/90/45): 1.22 / 1.21 / 1.18  
Luminous Opening: Rectangular (W 0.21' x L: 4' x H: 0')  
CIE Type: Semi-Indirect

Input Watts (W): 56.4  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): 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	103	103	103	103	92	92	92	92	73	73	73	55	55	55	39	39	39	31
1	95	91	88	85	85	82	79	77	65	64	62	50	49	48	36	35	35	29
2	87	81	76	71	78	73	69	65	59	56	53	46	44	42	33	32	31	26
3	80	72	66	61	72	66	60	56	53	49	46	41	39	37	31	29	28	24
4	74	65	58	53	67	59	53	49	48	44	41	38	35	33	28	27	26	21
5	69	58	51	46	62	53	47	42	44	39	36	35	32	29	26	24	23	20
6	63	53	45	40	57	48	42	37	40	35	32	32	29	26	24	22	21	18
7	59	48	41	36	53	44	38	33	36	32	29	29	26	24	22	21	19	16
8	55	44	37	32	50	40	34	30	33	29	26	27	24	22	21	19	17	15
9	51	40	33	29	46	37	31	27	31	26	23	25	22	20	19	17	16	14
10	48	37	30	26	43	34	28	24	28	24	21	23	20	18	18	16	15	13

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	16546	16546	16546
5°	16324	16674	16934
10°	16605	17025	17208
15°	17063	17317	17344
20°	17141	17333	17045
25°	16746	16931	16561
30°	15855	16034	15571
35°	14412	14412	14113
40°	11854	11736	11483
45°	7088	8330	6759
50°	2291	4642	2150
55°	811	1554	811
60°	52	439	26
65°	31	31	0
70°	38	0	0
75°	0	0	0
80°	0	0	0
85°	148	0	0

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 45°  
 Vertical Angle: 45°  
 Luminance: 8330 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	123.2	1.9
10°-20°	364.7	5.7
20°-30°	539.7	8.5
30°-40°	557.8	8.8
40°-50°	324.6	5.1
50°-60°	55.0	0.9
60°-70°	2.2	0.0
70°-80°	0.3	0.0
80°-90°	2.1	0.0
90°-100°	100.3	1.6
100°-110°	714.6	11.3
110°-120°	970.2	15.3
120°-130°	789.6	12.4
130°-140°	635.1	10.0
140°-150°	500.7	7.9
150°-160°	366.1	5.8
160°-170°	227.4	3.6
170°-180°	77.5	1.2
0°-30°	1027.6	16.2
0°-40°	1585.4	25.0
0°-60°	1964.9	30.9
0°-90°	1969.5	31.0
90°-120°	1785.1	28.1
90°-150°	3710.5	58.4
90°-180°	4382.0	69.0
0°-180°	6351.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1281	1281	1281	1281	1281	
5°	1259	1292	1286	1289	1306	121
15°	1276	1321	1295	1288	1297	359
25°	1175	1214	1188	1152	1162	537
35°	914	929	914	891	895	560
45°	388	452	456	440	370	300
55°	36	42	69	39	36	40
65°	1	1	1	0	0	1
75°	0	1	0	0	0	0
85°	1	1	0	0	0	0
90°	0	5	10	15	15	2
95°	41	76	41	46	56	46
105°	159	244	928	1186	785	168
115°	282	342	800	1663	1944	280
125°	405	460	754	1319	1560	360
135°	503	558	759	1086	1247	387
145°	595	645	764	946	1046	374
155°	698	723	780	858	898	320
165°	775	785	800	821	836	218
175°	816	821	816	810	805	77
180°	816	816	816	816	816	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1281.0	1281.0	1281.0	1281.0	1281.0
2.5°	1264.2	1289.2	1280.2	1281.1	1287.4
5°	1259.0	1292.2	1286.0	1289.4	1306.0
7.5°	1262.8	1296.4	1295.6	1296.6	1312.8
10°	1266.0	1301.2	1298.0	1297.3	1312.0
12.5°	1272.4	1310.7	1298.0	1296.5	1308.8
15°	1276.0	1321.0	1295.0	1288.2	1297.0
17.5°	1263.8	1313.9	1278.6	1260.5	1264.0
20°	1247.0	1297.8	1261.0	1234.1	1240.0
22.5°	1220.6	1269.1	1236.2	1203.0	1210.4
25°	1175.0	1214.1	1188.0	1152.2	1162.0
27.5°	1110.2	1141.1	1124.6	1089.9	1096.0
30°	1063.0	1088.4	1075.0	1041.1	1044.0
32.5°	1008.6	1030.1	1015.8	986.6	986.4
35°	914.0	928.7	914.0	891.1	895.0
37.5°	790.2	801.3	786.4	772.6	774.6
40°	703.0	711.8	696.0	683.0	681.0
42.5°	594.2	618.6	603.2	585.5	588.2
45°	388.0	451.6	456.0	440.4	370.0
47.5°	195.6	265.0	317.4	240.8	172.6
50°	114.0	156.0	231.0	127.5	107.0
52.5°	74.8	92.6	161.4	80.6	71.0
55°	36.0	41.9	69.0	38.9	36.0
57.5°	12.4	19.0	30.6	19.5	13.8
60°	2.0	7.9	17.0	5.9	1.0
62.5°	1.2	2.4	10.6	1.2	0.2
65°	1.0	1.0	1.0	0.0	0.0
67.5°	1.0	1.0	0.0	0.0	0.0
70°	1.0	1.0	0.0	0.0	0.0
72.5°	1.0	1.0	0.0	0.0	0.0
75°	0.0	1.0	0.0	0.0	0.0
77.5°	0.0	1.0	0.0	0.0	0.0
80°	0.0	1.0	0.0	0.0	0.0
82.5°	0.0	1.0	0.0	0.0	0.0
85°	1.0	1.0	0.0	0.0	0.0
87.5°	0.8	1.8	2.1	3.1	3.1
90°	0.0	5.0	10.3	15.4	15.4
92.5°	12.3	17.3	22.6	31.9	35.9
95°	41.0	76.2	41.0	46.4	56.4
97.5°	72.8	146.1	301.6	89.0	77.0
100°	97.5	182.7	605.3	178.2	118.0
102.5°	122.1	211.4	818.7	470.2	257.5
105°	159.0	244.3	928.5	1186.2	784.9
107.5°	196.0	260.2	886.5	1726.3	1617.0
110°	220.6	280.8	861.8	1814.0	1949.4



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	245.2	305.4	837.2	1762.7	1990.4
115°	282.2	342.3	800.3	1663.4	1944.3
117.5°	320.1	379.3	791.0	1555.8	1844.8
120°	348.8	404.0	774.6	1474.0	1775.0
122.5°	369.4	428.5	754.1	1403.7	1680.6
125°	405.3	460.4	754.1	1318.8	1559.5
127.5°	435.0	491.2	755.1	1220.2	1457.9
130°	451.4	511.6	759.2	1154.3	1380.0
132.5°	472.0	532.2	759.2	1124.6	1310.2
135°	502.7	557.9	759.2	1086.1	1246.6
137.5°	528.4	587.6	759.2	1043.5	1180.9
140°	548.9	604.1	759.2	1018.6	1144.0
142.5°	569.4	620.6	763.3	989.7	1107.1
145°	595.1	645.2	764.4	946.2	1046.5
147.5°	625.9	670.0	770.5	914.9	992.1
150°	646.4	686.5	774.6	894.1	959.3
152.5°	666.9	703.0	774.6	877.4	930.6
155°	697.7	722.8	779.8	857.6	897.8
157.5°	722.3	746.4	785.9	845.1	874.2
160°	738.7	758.8	790.0	836.8	861.8
162.5°	751.0	771.1	794.1	832.5	849.5
165°	774.6	784.7	800.3	821.1	836.2
167.5°	788.0	797.0	805.4	815.9	824.9
170°	800.3	805.3	805.4	815.8	820.8
172.5°	804.4	813.4	809.5	811.7	816.7
175°	815.7	820.7	815.7	810.4	805.4
177.5°	815.7	819.7	815.7	815.6	811.6
180°	815.7	815.7	815.7	815.7	815.7

(END OF REPORT)