

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: P644926

Luminaire Tested: OMN4DIP-SR4F0-50D150U935-WBMOOB-1DUDD-WW

Issue Date: 9/2/2020



**Test Information**

Test Method: LM-79-2019  
Report Number: P644926  
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-SR4F0-50D150U935-WBMOOB-1DUDD-WW  
Description: NEO-RAY CIRQUE 4-INCH DIAMETER LINEAR LED LUMINAIRE  
DOWNLIGHT - WHITE BAFFLE WITH MEDIUM OPTIC - 500 LUMENS PER FOOT  
UPLIGHT - BATWING OPTIC - 1500 LUMENS PER FOOT  
Light Source: 3500K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

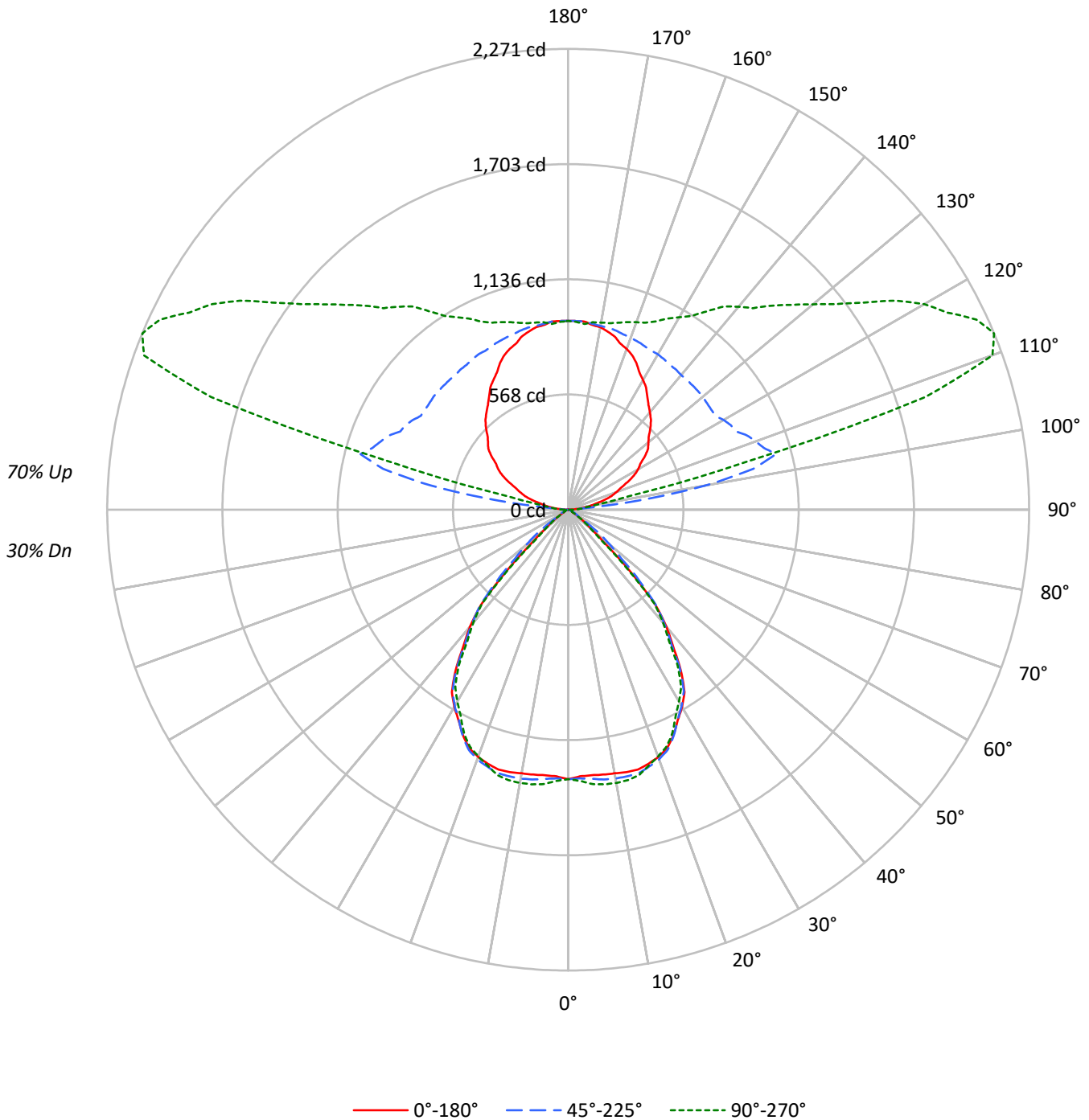
Lumens per Lamp: N/A  
Luminaire Lumens: 7136.5 lumens  
Efficiency: N/A  
Efficacy: 106.8 lumens/watt  
Spacing Criteria (0/90/45): 1.24 / 1.21 / 1.19  
Luminous Opening: Rectangular (W 0.21' x L: 4' x H: 0')  
CIE Type: Semi-Indirect

Input Watts (W): 66.8  
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	102	102	102	102	92	92	92	92	72	72	72	54	54	54	38	38	38	30				
1	94	91	87	84	85	82	79	76	65	63	61	49	48	47	35	34	34	27				
2	87	80	75	71	78	73	68	64	58	55	52	45	43	41	32	31	30	25				
3	80	72	65	60	72	65	59	55	52	48	45	40	38	36	30	28	27	22				
4	74	64	57	52	66	58	52	48	47	43	40	37	34	32	27	26	24	20				
5	68	58	50	45	61	52	46	42	43	38	35	34	31	28	25	23	22	18				
6	63	52	45	40	57	47	41	37	39	34	31	31	28	25	23	21	20	17				
7	58	47	40	35	53	43	37	32	35	31	28	28	25	23	21	20	18	15				
8	54	43	36	31	49	39	33	29	32	28	25	26	23	21	20	18	17	14				
9	51	39	32	28	46	36	30	26	30	25	22	24	21	19	18	17	15	13				
10	47	36	29	25	43	33	27	23	28	23	20	22	19	17	17	15	14	12				

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

	0°	45°	90°
0°	17153	17153	17153
5°	17024	17258	17595
10°	17300	17641	17930
15°	17732	17972	18093
20°	17828	17993	17787
25°	17487	17530	17316
30°	16720	16675	16272
35°	15264	15138	14822
40°	12680	12494	12258
45°	7964	9060	7599
50°	3054	5365	2833
55°	1441	2252	1464
60°	698	1137	620
65°	642	672	581
70°	642	642	566
75°	649	649	549
80°	669	595	521
85°	741	593	445

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 45°

Vertical Angle: 45°

Luminance: 9060 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	127.9	1.8
10°-20°	378.3	5.3
20°-30°	562.0	7.9
30°-40°	588.2	8.2
40°-50°	356.3	5.0
50°-60°	82.2	1.2
60°-70°	22.6	0.3
70°-80°	13.2	0.2
80°-90°	6.7	0.1
90°-100°	114.4	1.6
100°-110°	815.3	11.4
110°-120°	1106.9	15.5
120°-130°	900.9	12.6
130°-140°	724.6	10.2
140°-150°	571.2	8.0
150°-160°	417.7	5.9
160°-170°	259.4	3.6
170°-180°	88.5	1.2
0°-30°	1068.3	15.0
0°-40°	1656.5	23.2
0°-60°	2095.0	29.4
0°-90°	2137.5	30.0
90°-120°	2036.7	28.5
90°-150°	4233.4	59.3
90°-180°	4999.0	70.0
0°-180°	7136.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1328	1328	1328	1328	1328	
5°	1313	1343	1331	1336	1357	126
15°	1326	1366	1344	1333	1353	373
25°	1227	1263	1230	1198	1215	562
35°	968	983	960	938	940	595
45°	436	496	496	479	416	335
55°	64	73	100	69	65	66
65°	21	22	22	20	19	21
75°	13	13	13	12	11	14
85°	5	5	4	4	3	5
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°	1328.0	1328.0	1328.0	1328.0	1328.0
2.5°	1315.2	1338.7	1325.6	1326.6	1337.6
5°	1313.0	1343.3	1331.0	1336.5	1357.0
7.5°	1316.6	1348.3	1341.0	1342.9	1365.4
10°	1319.0	1352.2	1345.0	1344.5	1367.0
12.5°	1324.6	1359.4	1345.8	1342.9	1364.6
15°	1326.0	1366.1	1344.0	1333.4	1353.0
17.5°	1313.0	1357.2	1327.4	1305.6	1321.2
20°	1297.0	1342.0	1309.0	1278.4	1294.0
22.5°	1272.2	1316.4	1281.0	1248.0	1264.4
25°	1227.0	1263.2	1230.0	1198.4	1215.0
27.5°	1169.8	1195.2	1166.8	1136.8	1146.2
30°	1121.0	1146.4	1118.0	1087.1	1091.0
32.5°	1066.6	1088.1	1060.4	1032.7	1035.8
35°	968.0	982.7	960.0	938.0	940.0
37.5°	848.0	850.0	834.6	814.6	815.0
40°	752.0	757.9	741.0	725.0	727.0
42.5°	637.6	660.7	644.2	629.8	630.2
45°	436.0	495.6	496.0	478.6	416.0
47.5°	240.8	309.8	354.2	274.7	207.4
50°	152.0	196.0	267.0	160.6	141.0
52.5°	108.8	128.6	195.0	113.6	103.4
55°	64.0	72.8	100.0	68.9	65.0
57.5°	39.0	46.6	58.4	46.0	39.2
60°	27.0	33.8	44.0	30.8	24.0
62.5°	23.8	26.0	34.4	24.6	22.4
65°	21.0	22.0	22.0	20.0	19.0
67.5°	18.6	19.6	18.6	17.6	16.6
70°	17.0	18.0	17.0	16.0	15.0
72.5°	15.4	16.4	15.4	14.4	13.4
75°	13.0	13.0	13.0	12.0	11.0
77.5°	10.6	10.6	10.4	9.6	8.6
80°	9.0	9.0	8.0	8.0	7.0
82.5°	7.4	7.4	6.4	6.4	5.4
85°	5.0	5.0	4.0	4.0	3.0
87.5°	2.4	3.5	3.9	5.1	4.3
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)