

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: P645035

Luminaire Tested: OMN4DIP-SR4F0-75D100U930-BBMOOB-1DUDD-WW

Issue Date: 9/2/2020



**Test Information**

Test Method: LM-79-2019  
Report Number: P645035  
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-SR4F0-75D100U930-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 - 1000 LUMENS PER FOOT  
Light Source: 3000K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

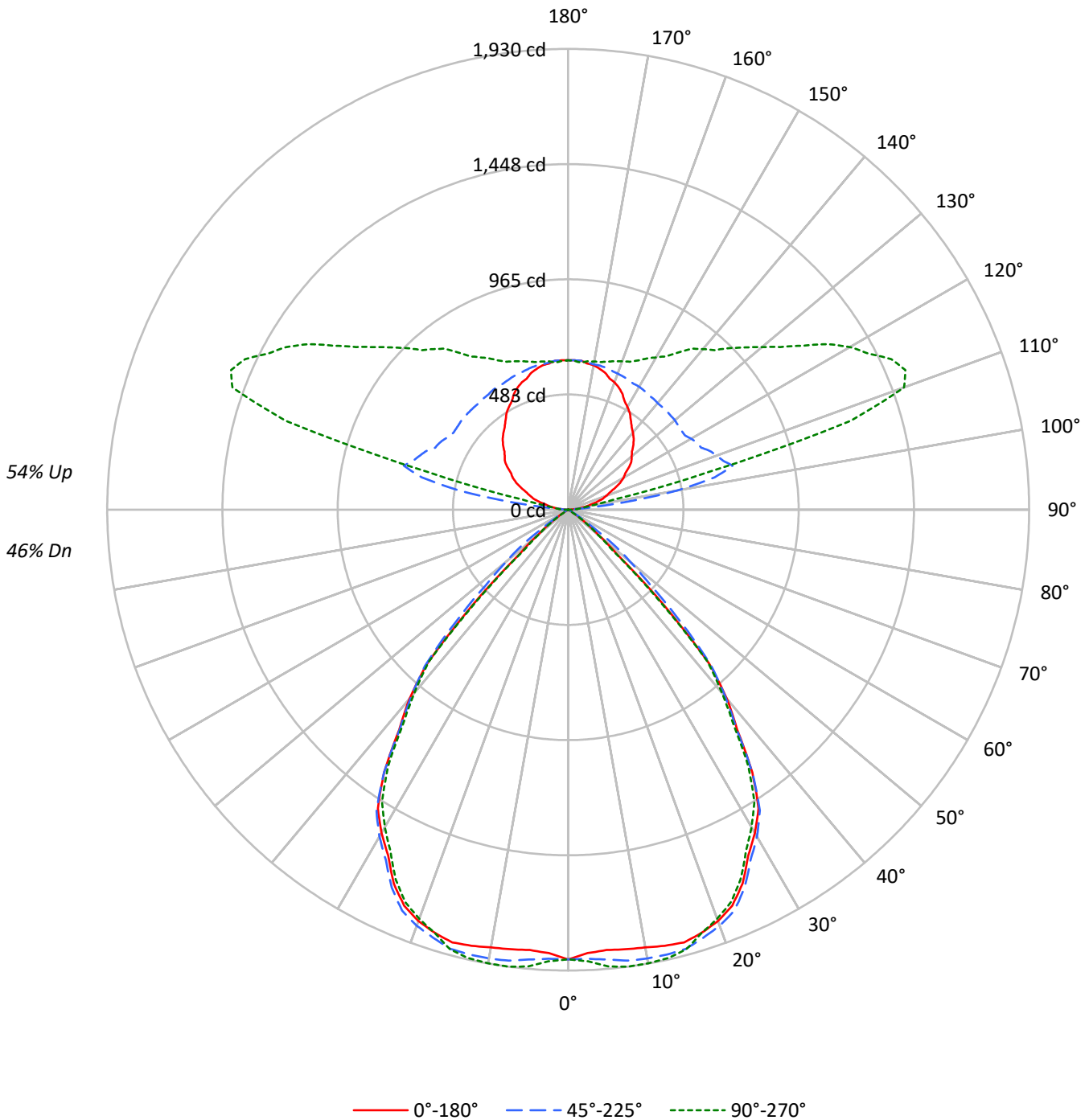
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6257.7 lumens  
Efficiency: N/A  
Efficacy: 110.0 lumens/watt  
Spacing Criteria (0/90/45): 1.22 / 1.2 / 1.18  
Luminous Opening: Rectangular (W 0.21' x L: 4' x H: 0')  
CIE Type: General Diffuse  
  
Input Watts (W): 56.9  
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	50	30	10	0	
RCR																						
0	106	106	106	106	98	98	98	98	81	81	81	66	66	66	53	53	53	46				
1	99	95	92	89	91	88	85	83	74	72	70	61	60	59	49	49	48	43				
2	91	85	80	76	84	79	75	71	67	64	61	56	54	52	46	45	43	39				
3	85	77	71	66	78	71	66	62	61	57	54	51	49	46	42	41	39	35				
4	79	69	63	57	72	65	59	54	55	51	48	47	44	42	39	37	36	32				
5	73	63	56	51	67	59	52	48	51	46	43	43	40	37	36	34	32	29				
6	68	57	50	45	63	53	47	43	46	42	38	40	36	34	34	31	29	27				
7	63	52	45	40	58	49	43	38	43	38	34	37	33	31	31	29	27	24				
8	59	48	41	36	55	45	39	34	39	35	31	34	30	28	29	27	25	22				
9	55	44	37	33	51	41	35	31	36	32	28	32	28	25	27	25	23	21				
10	52	41	34	30	48	38	32	28	34	29	26	29	26	23	25	23	21	19				

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

	0°	45°	90°
0°	24327	24327	24327
5°	24000	24515	24896
10°	24413	25031	25299
15°	25087	25460	25500
20°	25201	25484	25060
25°	24620	24893	24348
30°	23311	23573	22893
35°	21190	21190	20750
40°	17428	17254	16882
45°	10419	12246	9937
50°	3368	6824	3161
55°	1191	2283	1191
60°	75	646	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: 12246 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	181.2	2.9
10°-20°	536.1	8.6
20°-30°	793.4	12.7
30°-40°	820.1	13.1
40°-50°	477.2	7.6
50°-60°	80.8	1.3
60°-70°	3.2	0.1
70°-80°	0.5	0.0
80°-90°	1.8	0.0
90°-100°	77.0	1.2
100°-110°	548.6	8.8
110°-120°	744.7	11.9
120°-130°	606.1	9.7
130°-140°	487.5	7.8
140°-150°	384.3	6.1
150°-160°	281.0	4.5
160°-170°	174.6	2.8
170°-180°	59.5	1.0
0°-30°	1510.7	24.1
0°-40°	2330.9	37.2
0°-60°	2888.9	46.2
0°-90°	2894.3	46.3
90°-120°	1370.3	21.9
90°-150°	2848.3	45.5
90°-180°	3363.0	53.7
0°-180°	6257.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1883	1883	1883	1883	1883	
5°	1851	1900	1891	1896	1920	177
15°	1876	1942	1904	1894	1907	528
25°	1728	1785	1747	1694	1708	789
35°	1344	1365	1344	1310	1316	823
45°	570	664	670	648	544	441
55°	53	62	101	57	53	58
65°	2	2	2	0	0	2
75°	0	1	0	0	0	1
85°	2	2	0	0	0	1
90°	0	4	8	12	12	1
95°	32	58	32	36	43	35
105°	122	188	713	910	602	129
115°	217	263	614	1277	1492	215
125°	311	353	579	1012	1197	276
135°	386	428	583	834	957	297
145°	457	495	587	726	803	287
155°	536	555	599	658	689	246
165°	595	602	614	630	642	167
175°	626	630	626	622	618	59
180°	626	626	626	626	626	



TEST NUMBER: P645035

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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1883.4	1883.4	1883.4	1883.4	1883.4
2.5°	1858.7	1895.5	1882.2	1883.6	1892.8
5°	1851.0	1899.9	1890.7	1895.7	1920.1
7.5°	1856.6	1906.1	1904.8	1906.3	1930.1
10°	1861.3	1913.1	1908.4	1907.4	1928.9
12.5°	1870.7	1927.1	1908.4	1906.1	1924.2
15°	1876.0	1942.1	1903.9	1893.9	1906.9
17.5°	1858.1	1931.7	1879.8	1853.2	1858.4
20°	1833.4	1908.1	1854.0	1814.5	1823.1
22.5°	1794.6	1865.9	1817.5	1768.6	1779.6
25°	1727.5	1785.0	1746.6	1694.0	1708.4
27.5°	1632.2	1677.7	1653.4	1602.5	1611.4
30°	1562.9	1600.2	1580.5	1530.6	1534.9
32.5°	1482.9	1514.5	1493.5	1450.5	1450.2
35°	1343.8	1365.4	1343.8	1310.1	1315.9
37.5°	1161.8	1178.2	1156.2	1136.0	1138.8
40°	1033.6	1046.5	1023.3	1004.1	1001.2
42.5°	873.6	909.5	886.8	860.8	864.8
45°	570.4	663.9	670.4	647.5	544.0
47.5°	287.6	389.6	466.7	354.1	253.8
50°	167.6	229.4	339.6	187.5	157.3
52.5°	110.0	136.1	237.3	118.5	104.4
55°	52.9	61.6	101.4	57.2	52.9
57.5°	18.2	28.0	45.0	28.6	20.3
60°	2.9	11.6	25.0	8.7	1.5
62.5°	1.8	3.5	15.6	1.7	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	1.4	0.0	0.0	0.0
77.5°	0.0	1.4	0.0	0.0	0.0
80°	0.0	1.4	0.0	0.0	0.0
82.5°	0.0	1.4	0.0	0.0	0.0
85°	1.5	1.5	0.0	0.0	0.0
87.5°	1.2	1.9	1.6	2.4	2.4
90°	0.0	3.9	7.9	11.8	11.8
92.5°	9.5	13.3	17.3	24.5	27.6
95°	31.5	58.5	31.5	35.6	43.3
97.5°	55.9	112.1	231.5	68.3	59.1
100°	74.8	140.3	464.7	136.8	90.6
102.5°	93.7	162.3	628.5	360.9	197.7
105°	122.1	187.5	712.8	910.5	602.5
107.5°	150.4	199.7	680.5	1325.2	1241.2
110°	169.3	215.5	661.6	1392.4	1496.4



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	188.2	234.4	642.7	1353.1	1527.9
115°	216.6	262.8	614.3	1276.8	1492.5
117.5°	245.7	291.2	607.2	1194.3	1416.1
120°	267.8	310.1	594.6	1131.5	1362.5
122.5°	283.5	329.0	578.9	1077.5	1290.0
125°	311.1	353.4	578.9	1012.3	1197.1
127.5°	333.9	377.1	579.7	936.6	1119.1
130°	346.5	392.7	582.8	886.0	1059.3
132.5°	362.3	408.5	582.8	863.3	1005.7
135°	385.9	428.3	582.8	833.7	956.9
137.5°	405.6	451.0	582.8	801.0	906.5
140°	421.4	463.7	582.8	781.9	878.1
142.5°	437.1	476.4	586.0	759.7	849.8
145°	456.8	495.3	586.7	726.3	803.3
147.5°	480.4	514.3	591.5	702.3	761.6
150°	496.2	527.0	594.6	686.3	736.4
152.5°	511.9	539.6	594.6	673.5	714.3
155°	535.6	554.8	598.6	658.3	689.1
157.5°	554.5	572.9	603.3	648.7	671.0
160°	567.1	582.5	606.4	642.3	661.6
162.5°	576.5	591.9	609.6	639.0	652.1
165°	594.6	602.3	614.3	630.3	641.9
167.5°	604.9	611.8	618.2	626.3	633.2
170°	614.3	618.2	618.2	626.2	630.1
172.5°	617.5	624.4	621.4	623.1	626.9
175°	626.1	630.0	626.1	622.1	618.2
177.5°	626.1	629.2	626.1	626.1	623.0
180°	626.1	626.1	626.1	626.1	626.1

(END OF REPORT)