

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: P644620

Luminaire Tested: OMN4DIP-SR4F0-100D50U930-WBMOOB-1DUDD-WW

Issue Date: 9/2/2020



**Test Information**

Test Method: LM-79-2019  
Report Number: P644620  
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-SR4F0-100D50U930-WBMOOB-1DUDD-WW  
Description: NEO-RAY CIRQUE 4-INCH DIAMETER LINEAR LED LUMINAIRE  
DOWNLIGHT - WHITE BAFFLE WITH MEDIUM OPTIC - 1000 LUMENS PER FOOT  
UPLIGHT - BATWING OPTIC - 500 LUMENS PER FOOT  
Light Source: 3000K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

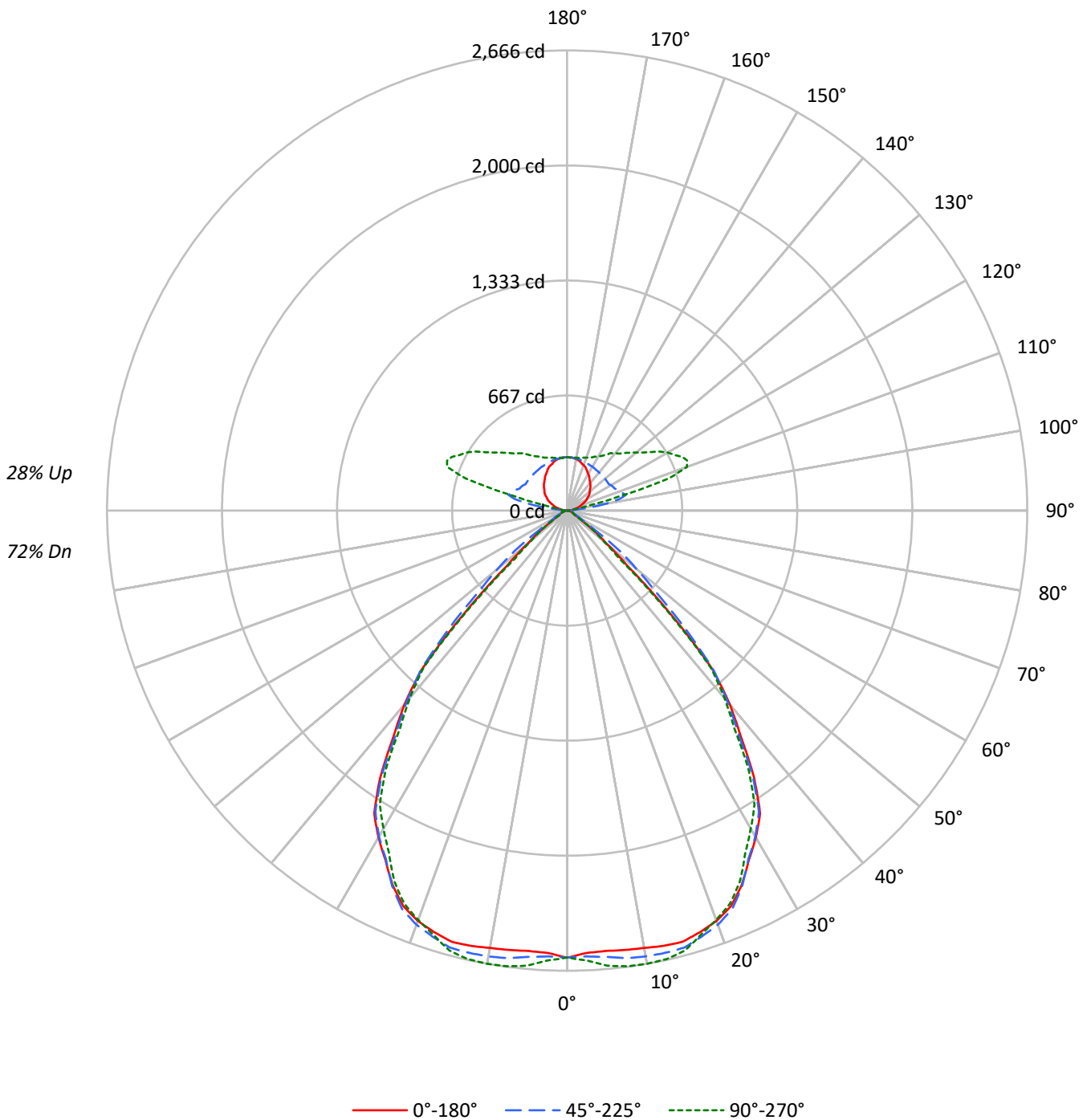
Lumens per Lamp: N/A  
Luminaire Lumens: 5824.9 lumens  
Efficiency: N/A  
Efficacy: 110.5 lumens/watt  
Spacing Criteria (0/90/45): 1.24 / 1.21 / 1.19  
Luminous Opening: Rectangular (W 0.21' x L: 4' x H: 0')  
CIE Type: Semi-Direct

Input Watts (W): 52.7  
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				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	112	112	112	112	106	106	106	106	95	95	95	85	85	85	76	76	76	72
1	105	102	99	96	100	97	94	92	87	85	84	79	77	76	71	70	69	65
2	98	92	87	83	93	88	83	80	80	77	74	73	70	68	66	64	62	59
3	91	83	77	73	87	80	74	70	73	69	65	67	64	61	61	59	56	53
4	85	76	69	64	81	73	67	62	67	62	58	61	58	55	56	54	51	48
5	79	69	62	57	75	67	60	55	61	56	52	57	53	49	52	49	46	44
6	74	63	56	51	70	61	55	50	57	51	47	52	48	45	48	45	42	40
7	69	58	51	46	66	56	50	45	52	47	43	49	44	41	45	41	39	37
8	65	54	47	42	62	52	45	41	48	43	39	45	41	37	42	38	35	34
9	61	50	43	38	58	48	42	37	45	40	36	42	37	34	39	35	33	31
10	57	46	39	35	55	45	38	34	42	37	33	39	35	32	37	33	30	28

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

	0°	45°	90°
0°	33454	33454	33454
5°	33202	33657	34315
10°	33740	34405	34967
15°	34582	35052	35286
20°	34770	35091	34690
25°	34105	34188	33772
30°	32609	32521	31736
35°	29769	29523	28908
40°	24729	24368	23908
45°	15532	17670	14820
50°	5956	10463	5526
55°	2810	4391	2855
60°	1361	2217	1209
65°	1253	1311	1134
70°	1254	1254	1107
75°	1268	1268	1073
80°	1309	1160	1019
85°	1452	1156	874

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 45°

Vertical Angle: 45°

Luminance: 17670 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	249.5	4.3
10°-20°	737.8	12.7
20°-30°	1096.1	18.8
30°-40°	1147.2	19.7
40°-50°	694.9	11.9
50°-60°	160.3	2.8
60°-70°	44.1	0.8
70°-80°	25.8	0.4
80°-90°	9.6	0.2
90°-100°	38.0	0.7
100°-110°	270.7	4.6
110°-120°	367.5	6.3
120°-130°	299.1	5.1
130°-140°	240.5	4.1
140°-150°	189.6	3.3
150°-160°	138.7	2.4
160°-170°	86.1	1.5
170°-180°	29.4	0.5
0°-30°	2083.4	35.8
0°-40°	3230.6	55.5
0°-60°	4085.9	70.1
0°-90°	4165.4	71.5
90°-120°	676.1	11.6
90°-150°	1405.3	24.1
90°-180°	1659.0	28.5
0°-180°	5824.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2590	2590	2590	2590	2590	
5°	2561	2620	2596	2606	2646	245
15°	2586	2664	2621	2601	2639	728
25°	2393	2464	2399	2337	2370	1096
35°	1888	1916	1872	1830	1833	1160
45°	850	967	967	933	811	653
55°	125	142	195	134	127	130
65°	41	43	43	39	37	41
75°	25	25	25	23	22	27
85°	10	10	8	8	6	10
90°	0	2	4	6	6	1
95°	16	29	16	18	21	17
105°	60	92	352	449	297	63
115°	107	130	303	630	736	106
125°	154	174	286	500	591	136
135°	190	211	288	411	472	146
145°	225	244	290	358	396	142
155°	264	274	295	325	340	121
165°	293	297	303	311	317	82
175°	309	311	309	307	305	29
180°	309	309	309	309	309	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2590.0	2590.0	2590.0	2590.0	2590.0
2.5°	2565.0	2610.8	2585.3	2587.3	2608.7
5°	2560.7	2619.8	2595.8	2606.5	2646.5
7.5°	2567.7	2629.5	2615.3	2619.1	2662.9
10°	2572.4	2637.3	2623.1	2622.2	2666.0
12.5°	2583.3	2651.2	2624.7	2619.0	2661.4
15°	2586.1	2664.3	2621.2	2600.6	2638.7
17.5°	2560.7	2646.9	2588.8	2546.2	2576.7
20°	2529.5	2617.2	2552.9	2493.2	2523.7
22.5°	2481.1	2567.3	2498.3	2433.9	2465.9
25°	2393.0	2463.6	2398.8	2337.2	2369.6
27.5°	2281.4	2331.0	2275.6	2217.1	2235.4
30°	2186.3	2235.8	2180.4	2120.1	2127.8
32.5°	2080.2	2122.1	2068.1	2014.0	2020.1
35°	1887.9	1916.5	1872.3	1829.5	1833.3
37.5°	1653.8	1657.7	1627.7	1588.7	1589.5
40°	1466.6	1478.1	1445.2	1414.0	1417.9
42.5°	1243.5	1288.5	1256.4	1228.3	1229.1
45°	850.3	966.6	967.3	933.4	811.3
47.5°	469.6	604.3	690.8	535.7	404.5
50°	296.4	382.3	520.7	313.1	275.0
52.5°	212.2	250.7	380.3	221.5	201.7
55°	124.8	142.0	195.0	134.4	126.8
57.5°	76.1	90.9	113.9	89.8	76.5
60°	52.7	66.0	85.8	60.2	46.8
62.5°	46.4	50.6	67.1	47.9	43.7
65°	41.0	42.9	42.9	39.0	37.1
67.5°	36.3	38.2	36.3	34.3	32.4
70°	33.2	35.1	33.2	31.2	29.3
72.5°	30.0	31.9	30.0	28.0	26.1
75°	25.4	25.4	25.4	23.4	21.5
77.5°	20.7	20.7	20.3	18.7	16.8
80°	17.6	17.6	15.6	15.6	13.7
82.5°	14.4	14.4	12.5	12.4	10.5
85°	9.8	9.8	7.8	7.8	5.9
87.5°	4.7	5.1	3.9	4.3	2.7
90°	0.0	1.9	3.9	5.8	5.8
92.5°	4.7	6.6	8.5	12.1	13.6
95°	15.5	28.8	15.5	17.6	21.4
97.5°	27.6	55.3	114.2	33.7	29.1
100°	36.9	69.2	229.3	67.5	44.7
102.5°	46.2	80.1	310.1	178.1	97.5
105°	60.2	92.5	351.7	449.3	297.3
107.5°	74.2	98.5	335.7	653.8	612.4
110°	83.5	106.3	326.4	687.0	738.3



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	92.9	115.7	317.1	667.6	753.9
115°	106.9	129.7	303.1	630.0	736.4
117.5°	121.2	143.7	299.6	589.3	698.7
120°	132.1	153.0	293.4	558.3	672.3
122.5°	139.9	162.3	285.6	531.6	636.5
125°	153.5	174.4	285.6	499.5	590.7
127.5°	164.8	186.0	286.0	462.1	552.2
130°	171.0	193.8	287.6	437.2	522.7
132.5°	178.8	201.5	287.6	425.9	496.2
135°	190.4	211.3	287.6	411.3	472.1
137.5°	200.1	222.5	287.6	395.2	447.3
140°	207.9	228.8	287.6	385.8	433.3
142.5°	215.7	235.0	289.1	374.8	419.3
145°	225.4	244.4	289.5	358.4	396.4
147.5°	237.0	253.8	291.8	346.5	375.8
150°	244.8	260.0	293.4	338.6	363.3
152.5°	252.6	266.3	293.4	332.3	352.5
155°	264.2	273.7	295.3	324.8	340.0
157.5°	273.6	282.7	297.7	320.1	331.1
160°	279.8	287.4	299.2	316.9	326.4
162.5°	284.4	292.0	300.8	315.3	321.8
165°	293.4	297.2	303.1	311.0	316.7
167.5°	298.4	301.9	305.0	309.0	312.4
170°	303.1	305.0	305.0	309.0	310.9
172.5°	304.7	308.1	306.6	307.4	309.3
175°	308.9	310.8	308.9	306.9	305.0
177.5°	308.9	310.4	308.9	308.9	307.4
180°	308.9	308.9	308.9	308.9	308.9

(END OF REPORT)