

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: P644650

Luminaire Tested: OMN4DIP-SR4F0-100D75U930-WBMOOB-1DUDD-WW

Issue Date: 9/2/2020



Test Information

Test Method: LM-79-2019
Report Number: P644650
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-SR4F0-100D75U930-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 - 750 LUMENS PER FOOT
Light Source: 3000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

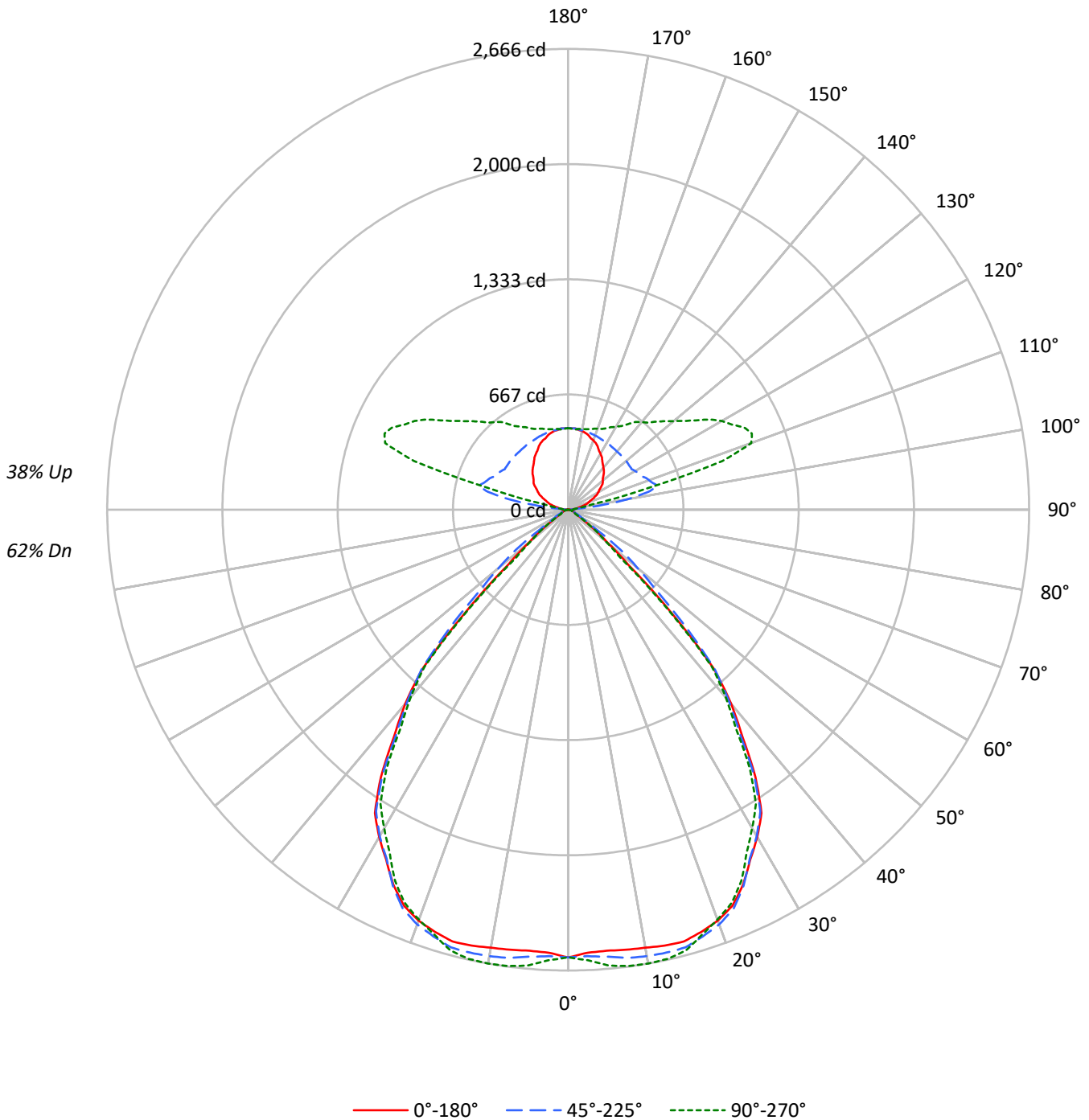
Lumens per Lamp: N/A
Luminaire Lumens: 6697.9 lumens
Efficiency: N/A
Efficacy: 113.7 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.21 / 1.19
Luminous Opening: Rectangular (W 0.21' x L: 4' x H: 0')
CIE Type: Semi-Direct

Input Watts (W): 58.9
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	110	110	110	110	103	103	103	103	90	90	90	78	78	78	67	67	67	62																			
1	103	99	96	93	96	93	91	88	82	80	79	72	71	70	63	62	61	57																			
2	95	89	84	80	90	84	80	76	75	72	69	66	64	62	58	57	55	51																			
3	89	81	75	70	83	76	71	67	68	64	61	61	58	55	54	52	50	46																			
4	82	73	66	61	78	70	64	59	62	58	54	56	52	50	50	47	45	42																			
5	77	67	60	54	72	63	57	52	57	52	48	51	48	45	46	43	41	38																			
6	71	61	54	49	67	58	52	47	53	47	44	48	43	40	43	40	37	35																			
7	67	56	49	44	63	53	47	42	48	43	39	44	40	37	40	37	34	32																			
8	62	51	44	39	59	49	43	38	45	40	36	41	37	34	37	34	31	29																			
9	59	47	41	36	55	45	39	35	42	36	33	38	34	31	35	31	29	27																			
10	55	44	37	33	52	42	36	32	39	34	30	35	31	28	32	29	27	25																			

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	3.7
10°-20°	737.8	11.0
20°-30°	1096.1	16.4
30°-40°	1147.2	17.1
40°-50°	694.9	10.4
50°-60°	160.3	2.4
60°-70°	44.1	0.7
70°-80°	25.8	0.4
80°-90°	10.0	0.1
90°-100°	57.9	0.9
100°-110°	413.0	6.2
110°-120°	560.7	8.4
120°-130°	456.3	6.8
130°-140°	367.0	5.5
140°-150°	289.3	4.3
150°-160°	211.6	3.2
160°-170°	131.4	2.0
170°-180°	44.8	0.7
0°-30°	2083.4	31.1
0°-40°	3230.6	48.2
0°-60°	4085.9	61.0
0°-90°	4165.8	62.2
90°-120°	1031.6	15.4
90°-150°	2144.3	32.0
90°-180°	2532.0	37.8
0°-180°	6697.9	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	3	6	9	9	2
95°	24	44	24	27	33	27
105°	92	141	537	686	454	97
115°	163	198	462	961	1124	162
125°	234	266	436	762	901	208
135°	290	322	439	628	720	224
145°	344	373	442	547	605	216
155°	403	418	451	496	519	185
165°	448	454	462	474	483	126
175°	471	474	471	468	465	45
180°	471	471	471	471	471	



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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	5.3	4.3	4.9	3.3
90°	0.0	2.9	5.9	8.9	8.9
92.5°	7.1	10.0	13.0	18.4	20.8
95°	23.7	44.0	23.7	26.8	32.6
97.5°	42.1	84.4	174.3	51.4	44.5
100°	56.3	105.6	349.8	103.0	68.2
102.5°	70.6	122.2	473.2	271.7	148.8
105°	91.9	141.2	536.6	685.5	453.6
107.5°	113.2	150.4	512.3	997.6	934.5
110°	127.5	162.3	498.1	1048.3	1126.6



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	141.7	176.5	483.8	1018.7	1150.3
115°	163.1	197.8	462.5	961.3	1123.6
117.5°	185.0	219.2	457.1	899.1	1066.1
120°	201.6	233.5	447.7	851.8	1025.8
122.5°	213.5	247.7	435.8	811.2	971.2
125°	234.2	266.1	435.8	762.1	901.2
127.5°	251.4	283.9	436.4	705.1	842.5
130°	260.9	295.7	438.8	667.0	797.5
132.5°	272.7	307.5	438.8	649.9	757.2
135°	290.5	322.4	438.8	627.6	720.4
137.5°	305.4	339.6	438.8	603.0	682.5
140°	317.2	349.1	438.8	588.6	661.1
142.5°	329.1	358.6	441.1	571.9	639.8
145°	343.9	372.9	441.7	546.8	604.8
147.5°	361.7	387.2	445.3	528.7	573.4
150°	373.5	396.7	447.7	516.7	554.4
152.5°	385.4	406.3	447.7	507.1	537.8
155°	403.2	417.7	450.6	495.6	518.8
157.5°	417.4	431.3	454.2	488.4	505.2
160°	426.9	438.5	456.6	483.6	498.1
162.5°	434.0	445.6	458.9	481.1	490.9
165°	447.7	453.5	462.5	474.5	483.2
167.5°	455.4	460.6	465.4	471.5	476.7
170°	462.5	465.4	465.4	471.4	474.3
172.5°	464.9	470.1	467.8	469.1	472.0
175°	471.4	474.3	471.4	468.3	465.4
177.5°	471.4	473.7	471.4	471.3	469.0
180°	471.4	471.4	471.4	471.4	471.4

(END OF REPORT)