

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: P644651

Luminaire Tested: OMN4DIP-SR4F0-100D75U935-BBMOOB-1DUDD-WW

Issue Date: 9/2/2020



Test Information

Test Method: LM-79-2019
Report Number: P644651
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-SR4F0-100D75U935-BBMOOB-1DUDD-WW
Description: NEO-RAY CIRQUE 4-INCH DIAMETER LINEAR LED LUMINAIRE
DOWNLIGHT - BLACK BAFFLE WITH MEDIUM OPTIC - 1000 LUMENS PER FOOT
UPLIGHT - BATWING OPTIC - 750 LUMENS PER FOOT
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

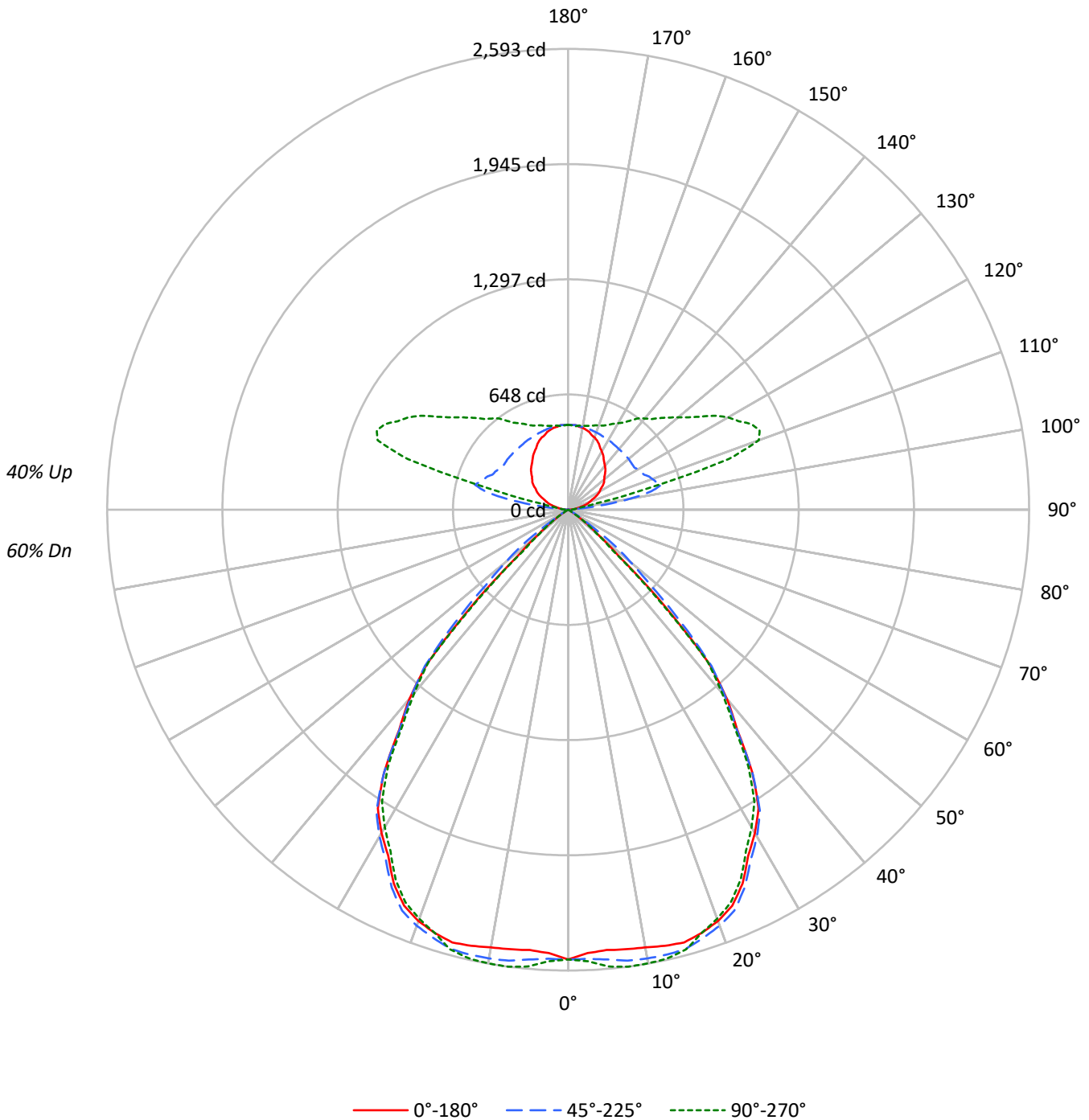
Lumens per Lamp: N/A
Luminaire Lumens: 6452.8 lumens
Efficiency: N/A
Efficacy: 109.6 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.21 / 1.18
Luminous Opening: Rectangular (W 0.21' x L: 4' x H: 0')
CIE Type: Semi-Direct

Input Watts (W): 58.9
Input Voltage (V): 120
Input Current (A_{in}): 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

TEST NUMBER: P644651

CATALOG NUMBER: OMN4DIP-SR4F0-100D75U935-BBMOOB-1DUDD-WW

Luminous Intensity Polar Plot





TEST NUMBER: P644651

CATALOG NUMBER: OMN4DIP-SR4F0-100D75U935-BBMOOB-1DUDD-WW

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	50	30	10	0										
RCR																																					
0	110	110	110	110	102	102	102	102	89	89	89	77	77	77	66	66	66	66	66	66	66	66	66	66	66	66	60										
1	102	99	96	93	96	93	90	88	82	80	78	71	70	69	62	61	60	60	60	60	60	60	60	60	60	60	60	55									
2	95	89	84	80	89	84	80	76	75	71	69	66	63	61	57	56	54	54	54	54	54	54	54	54	54	54	54	51									
3	89	81	75	70	83	76	71	67	68	64	61	60	57	55	53	51	49	49	49	49	49	49	49	49	49	49	49	46									
4	83	73	67	62	77	70	64	59	62	58	54	56	52	49	49	47	45	45	45	45	45	45	45	45	45	45	45	42									
5	77	67	60	55	72	64	57	53	57	52	49	51	48	45	46	43	41	41	41	41	41	41	41	41	41	41	41	38									
6	72	61	54	49	67	58	52	47	53	48	44	47	43	41	42	40	37	37	37	37	37	37	37	37	37	37	37	35									
7	67	56	49	44	63	53	47	43	48	43	40	44	40	37	39	36	34	34	34	34	34	34	34	34	34	34	34	32									
8	63	52	45	40	59	49	43	39	45	40	36	41	37	34	37	34	31	31	31	31	31	31	31	31	31	31	31	29									
9	59	48	41	36	55	46	39	35	42	37	33	38	34	31	34	31	29	29	29	29	29	29	29	29	29	29	29	27									
10	55	44	38	33	52	42	36	32	39	34	30	35	31	28	32	29	27	27	27	27	27	27	27	27	27	27	27	25									

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	32686	32686	32686
5°	32248	32939	33451
10°	32802	33631	33994
15°	33706	34209	34261
20°	33861	34241	33670
25°	33080	33447	32714
30°	31320	31673	30759
35°	28470	28470	27879
40°	23416	23183	22684
45°	14002	16455	13351
50°	4525	9169	4248
55°	1601	3069	1601
60°	103	868	52
65°	61	61	0
70°	76	0	0
75°	0	0	0
80°	0	0	0
85°	296	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 16455 cd/sqm



TEST NUMBER: P644651

CATALOG NUMBER: OMN4DIP-SR4F0-100D75U935-BBMOOB-1DUDD-WW

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	243.4	3.8
10°-20°	720.4	11.2
20°-30°	1066.0	16.5
30°-40°	1101.9	17.1
40°-50°	641.1	9.9
50°-60°	108.6	1.7
60°-70°	4.3	0.1
70°-80°	0.6	0.0
80°-90°	1.6	0.0
90°-100°	58.7	0.9
100°-110°	418.3	6.5
110°-120°	567.9	8.8
120°-130°	462.2	7.2
130°-140°	371.7	5.8
140°-150°	293.1	4.5
150°-160°	214.3	3.3
160°-170°	133.1	2.1
170°-180°	45.4	0.7
0°-30°	2029.9	31.5
0°-40°	3131.8	48.5
0°-60°	3881.5	60.2
0°-90°	3888.0	60.3
90°-120°	1044.9	16.2
90°-150°	2171.9	33.7
90°-180°	2565.0	39.8
0°-180°	6452.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2530	2530	2530	2530	2530	
5°	2487	2553	2540	2547	2580	238
15°	2521	2610	2558	2545	2562	709
25°	2321	2398	2347	2276	2295	1060
35°	1806	1834	1806	1760	1768	1106
45°	766	892	901	870	731	593
55°	71	83	136	77	71	78
65°	2	2	2	0	0	2
75°	0	2	0	0	0	1
85°	2	2	0	0	0	1
90°	0	3	6	9	9	1
95°	24	45	24	27	33	27
105°	93	143	544	694	459	98
115°	165	200	468	974	1138	164
125°	237	270	441	772	913	211
135°	294	327	444	636	730	226
145°	348	378	447	554	613	219
155°	408	423	456	502	526	187
165°	453	459	468	481	490	127
175°	478	480	478	474	471	45
180°	478	478	478	478	478	



TEST NUMBER: P644651

CATALOG NUMBER: OMN4DIP-SR4F0-100D75U935-BBMOOB-1DUDD-WW

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2530.5	2530.5	2530.5	2530.5	2530.5
2.5°	2497.3	2546.8	2528.9	2530.8	2543.2
5°	2487.1	2552.7	2540.4	2547.1	2579.9
7.5°	2494.6	2561.0	2559.4	2561.3	2593.3
10°	2500.9	2570.4	2564.1	2562.8	2591.8
12.5°	2513.5	2589.2	2564.1	2561.1	2585.4
15°	2520.6	2609.5	2558.2	2544.7	2562.1
17.5°	2496.5	2595.4	2525.8	2490.0	2496.9
20°	2463.4	2563.8	2491.0	2437.9	2449.5
22.5°	2411.2	2507.0	2442.0	2376.4	2391.1
25°	2321.1	2398.4	2346.8	2276.1	2295.4
27.5°	2193.1	2254.1	2221.6	2153.1	2165.1
30°	2099.9	2150.1	2123.6	2056.5	2062.3
32.5°	1992.4	2034.9	2006.6	1948.9	1948.6
35°	1805.5	1834.5	1805.5	1760.3	1768.0
37.5°	1561.0	1583.0	1553.5	1526.3	1530.2
40°	1388.7	1406.1	1374.9	1349.1	1345.3
42.5°	1173.8	1222.1	1191.6	1156.5	1161.9
45°	766.5	892.0	900.8	870.0	730.9
47.5°	386.4	523.5	627.0	475.8	341.0
50°	225.2	308.3	456.3	251.9	211.4
52.5°	147.8	182.9	318.8	159.2	140.3
55°	71.1	82.7	136.3	76.9	71.1
57.5°	24.5	37.6	60.4	38.5	27.3
60°	4.0	15.5	33.6	11.6	2.0
62.5°	2.4	4.7	20.9	2.3	0.4
65°	2.0	2.0	2.0	0.0	0.0
67.5°	2.0	2.0	0.0	0.0	0.0
70°	2.0	2.0	0.0	0.0	0.0
72.5°	2.0	2.0	0.0	0.0	0.0
75°	0.0	1.9	0.0	0.0	0.0
77.5°	0.0	1.9	0.0	0.0	0.0
80°	0.0	1.9	0.0	0.0	0.0
82.5°	0.0	1.9	0.0	0.0	0.0
85°	2.0	2.0	0.0	0.0	0.0
87.5°	1.6	2.2	1.2	1.8	1.8
90°	0.0	2.9	6.0	9.0	9.0
92.5°	7.2	10.1	13.2	18.7	21.0
95°	24.0	44.6	24.0	27.2	33.0
97.5°	42.6	85.5	176.6	52.1	45.0
100°	57.1	107.0	354.3	104.3	69.1
102.5°	71.5	123.7	479.3	275.2	150.7
105°	93.1	143.0	543.5	694.3	459.4
107.5°	114.7	152.3	518.9	1010.5	946.5
110°	129.1	164.4	504.5	1061.8	1141.1



TEST NUMBER: P644651

CATALOG NUMBER: OMN4DIP-SR4F0-100D75U935-BBMOOB-1DUDD-WW

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	143.5	178.8	490.1	1031.8	1165.1
115°	165.2	200.4	468.4	973.7	1138.1
117.5°	187.4	222.0	463.0	910.7	1079.8
120°	204.2	236.5	453.4	862.8	1039.0
122.5°	216.2	250.9	441.4	821.7	983.7
125°	237.2	269.5	441.4	771.9	912.9
127.5°	254.6	287.5	442.0	714.2	853.4
130°	264.3	299.5	444.4	675.6	807.8
132.5°	276.3	311.5	444.4	658.3	766.9
135°	294.3	326.6	444.4	635.7	729.7
137.5°	309.3	343.9	444.4	610.8	691.3
140°	321.3	353.6	444.4	596.2	669.6
142.5°	333.3	363.3	446.8	579.3	648.0
145°	348.3	377.7	447.4	553.9	612.6
147.5°	366.3	392.2	451.0	535.5	580.8
150°	378.4	401.8	453.4	523.4	561.5
152.5°	390.4	411.5	453.4	513.6	544.7
155°	408.4	423.1	456.4	502.0	525.5
157.5°	422.8	436.9	460.0	494.7	511.7
160°	432.4	444.2	462.4	489.8	504.5
162.5°	439.6	451.4	464.8	487.3	497.3
165°	453.4	459.3	468.4	480.7	489.5
167.5°	461.2	466.5	471.4	477.6	482.9
170°	468.4	471.4	471.4	477.5	480.5
172.5°	470.8	476.1	473.8	475.1	478.1
175°	477.5	480.4	477.5	474.4	471.4
177.5°	477.5	479.8	477.5	477.4	475.1
180°	477.5	477.5	477.5	477.5	477.5

(END OF REPORT)