

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: P644621

Luminaire Tested: OMN4DIP-SR4F0-100D50U935-BBMOOB-1DUDD-WW

Issue Date: 9/2/2020



Test Information

Test Method: LM-79-2019
Report Number: P644621
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-SR4F0-100D50U935-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 - 500 LUMENS PER FOOT
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

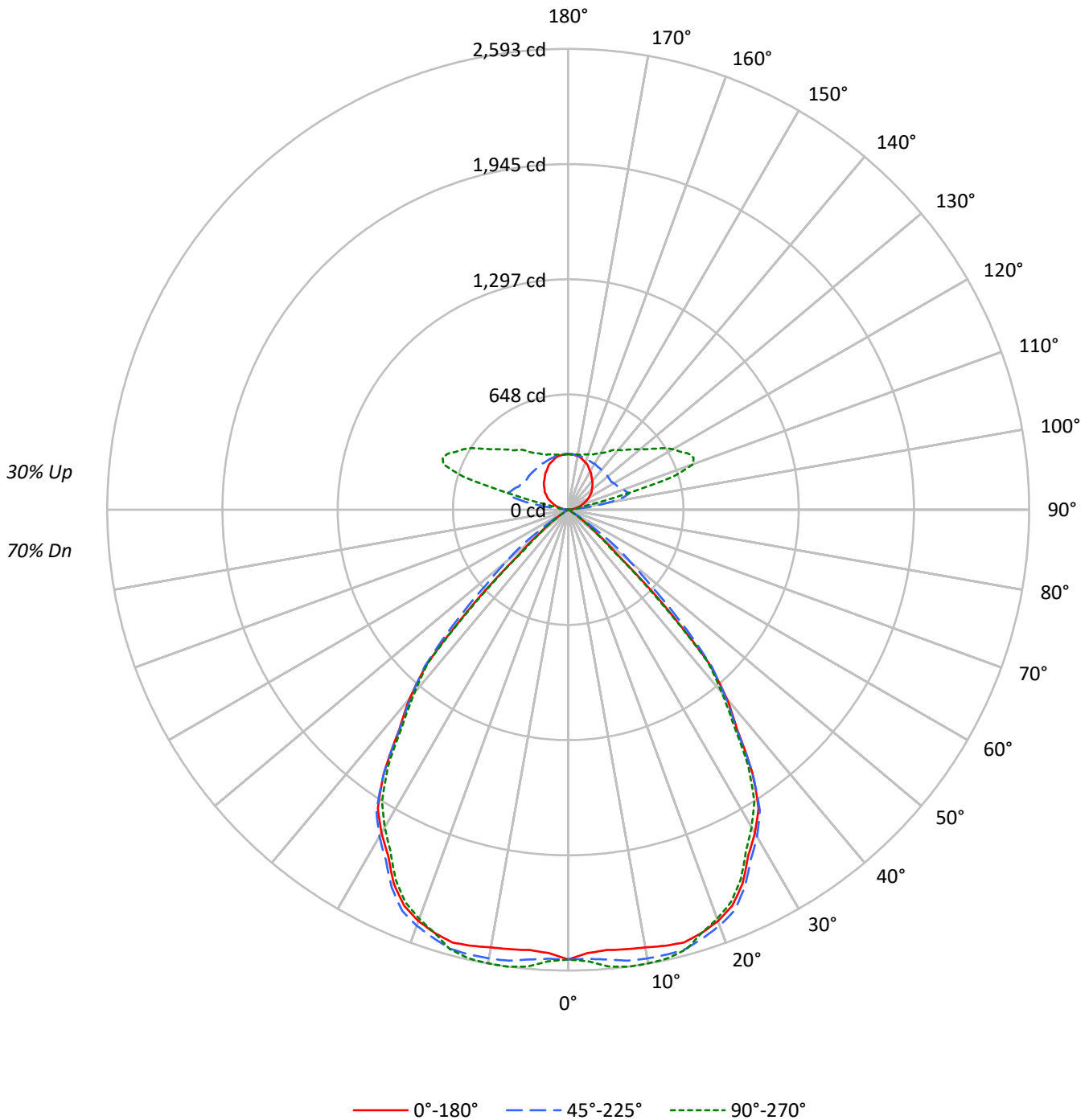
Lumens per Lamp: N/A
Luminaire Lumens: 5568.5 lumens
Efficiency: N/A
Efficacy: 105.7 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.21 / 1.18
Luminous Opening: Rectangular (W 0.21' x L: 4' x H: 0')
CIE Type: Semi-Direct

Input Watts (W): 52.7
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

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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	94	94	94	84	84	84	74	74	74	70
1	105	102	99	96	99	96	94	91	87	85	83	78	77	75	70	69	68	64
2	98	92	87	83	93	88	84	80	80	76	74	72	70	68	65	63	62	59
3	91	84	78	73	87	80	75	71	73	69	66	67	63	61	61	58	56	53
4	85	76	70	65	81	73	67	63	67	62	59	61	58	55	56	53	51	48
5	80	70	63	58	76	67	61	56	62	57	53	57	53	50	52	49	47	44
6	74	64	57	52	71	61	55	51	57	52	48	52	48	45	48	45	43	40
7	70	59	52	47	66	57	50	46	52	47	43	49	44	41	45	42	39	37
8	65	54	47	43	62	52	46	42	49	43	40	45	41	38	42	38	36	34
9	61	50	43	39	58	48	42	38	45	40	36	42	38	35	39	36	33	31
10	58	47	40	36	55	45	39	35	42	37	33	39	35	32	37	33	31	29

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



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	243.4	4.4
10°-20°	720.4	12.9
20°-30°	1066.0	19.1
30°-40°	1101.9	19.8
40°-50°	641.1	11.5
50°-60°	108.6	2.0
60°-70°	4.3	0.1
70°-80°	0.6	0.0
80°-90°	1.3	0.0
90°-100°	38.5	0.7
100°-110°	274.1	4.9
110°-120°	372.2	6.7
120°-130°	302.9	5.4
130°-140°	243.6	4.4
140°-150°	192.1	3.4
150°-160°	140.4	2.5
160°-170°	87.2	1.6
170°-180°	29.7	0.5
0°-30°	2029.9	36.5
0°-40°	3131.8	56.2
0°-60°	3881.5	69.7
0°-90°	3887.7	69.8
90°-120°	684.8	12.3
90°-150°	1423.4	25.6
90°-180°	1681.0	30.2
0°-180°	5568.5	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	2	4	6	6	1
95°	16	29	16	18	22	18
105°	61	94	356	455	301	64
115°	108	131	307	638	746	107
125°	156	177	289	506	598	138
135°	193	214	291	417	478	148
145°	228	248	293	363	402	143
155°	268	277	299	329	344	123
165°	297	301	307	315	321	83
175°	313	315	313	311	309	30
180°	313	313	313	313	313	



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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	2.0	0.8	1.2	1.2
90°	0.0	1.9	3.9	5.9	5.9
92.5°	4.7	6.6	8.7	12.2	13.8
95°	15.7	29.2	15.7	17.8	21.6
97.5°	27.9	56.0	115.7	34.1	29.5
100°	37.4	70.1	232.2	68.4	45.3
102.5°	46.8	81.1	314.1	180.4	98.8
105°	61.0	93.7	356.2	455.0	301.1
107.5°	75.2	99.8	340.1	662.3	620.3
110°	84.6	107.7	330.6	695.9	747.8

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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	94.1	117.2	321.2	676.2	763.6
115°	108.2	131.3	307.0	638.1	745.9
117.5°	122.8	145.5	303.5	596.9	707.7
120°	133.8	155.0	297.2	565.5	680.9
122.5°	141.7	164.4	289.3	538.5	644.7
125°	155.5	176.6	289.3	505.9	598.3
127.5°	166.9	188.4	289.7	468.1	559.3
130°	173.2	196.3	291.3	442.8	529.4
132.5°	181.1	204.1	291.3	431.4	502.6
135°	192.9	214.0	291.3	416.6	478.2
137.5°	202.7	225.4	291.3	400.3	453.0
140°	210.6	231.7	291.3	390.8	438.9
142.5°	218.4	238.1	292.8	379.7	424.7
145°	228.3	247.5	293.2	363.0	401.5
147.5°	240.1	257.0	295.6	351.0	380.6
150°	248.0	263.4	297.2	343.0	368.0
152.5°	255.8	269.7	297.2	336.6	357.0
155°	267.6	277.3	299.1	329.0	344.4
157.5°	277.1	286.3	301.5	324.2	335.3
160°	283.4	291.1	303.1	321.0	330.6
162.5°	288.1	295.8	304.6	319.4	325.9
165°	297.2	301.0	307.0	315.0	320.8
167.5°	302.3	305.7	309.0	313.0	316.5
170°	307.0	308.9	309.0	313.0	314.9
172.5°	308.6	312.0	310.5	311.4	313.3
175°	312.9	314.8	312.9	310.9	309.0
177.5°	312.9	314.4	312.9	312.9	311.3
180°	312.9	312.9	312.9	312.9	312.9

(END OF REPORT)