

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: P644627

Luminaire Tested: OMN4DIP-SR4F0-100D50U940-BBMOOB-1DUDD-WW

Issue Date: 9/2/2020



Test Information

Test Method: LM-79-2019
Report Number: P644627
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-SR4F0-100D50U940-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: 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

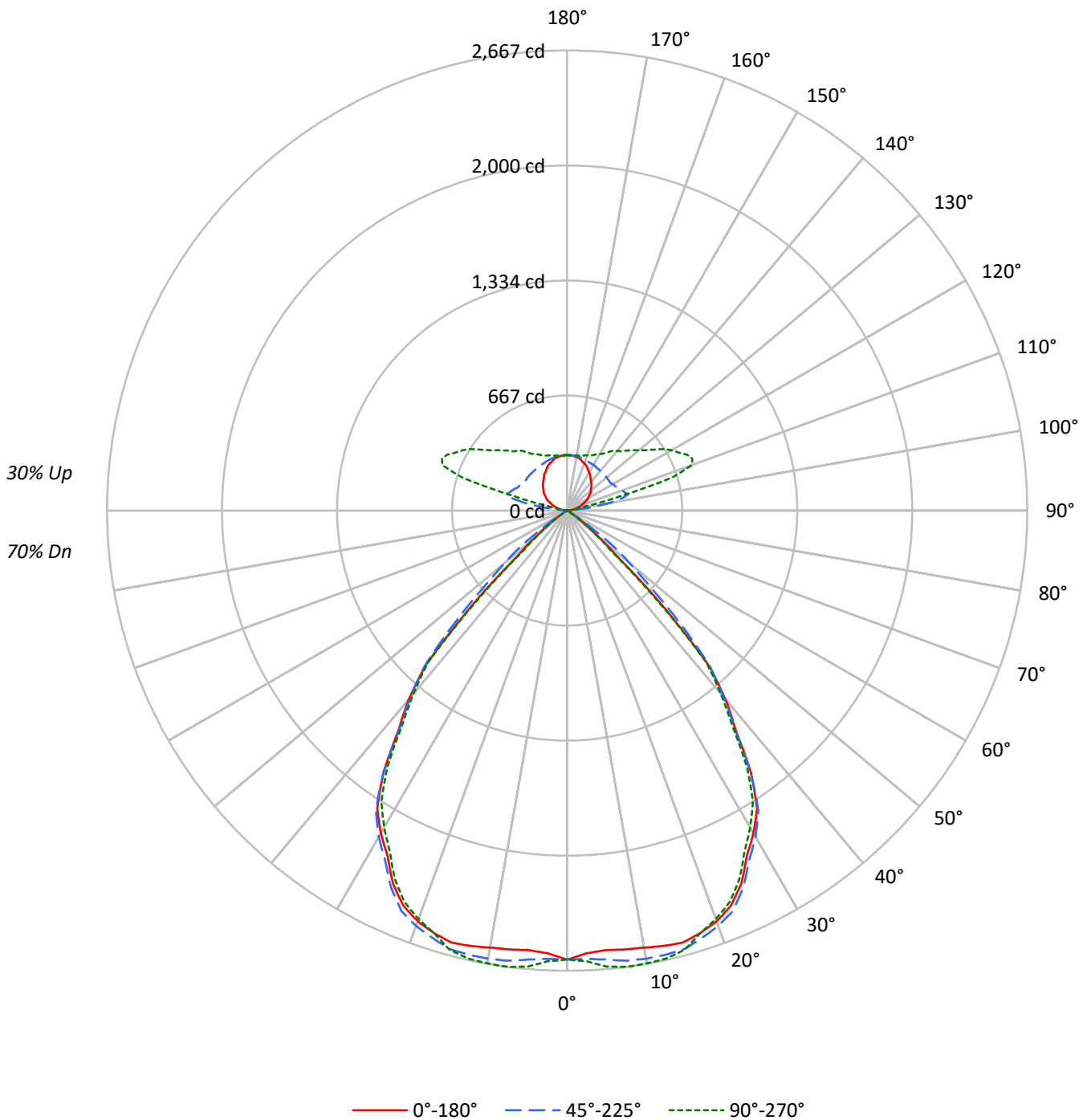
Lumens per Lamp: N/A
Luminaire Lumens: 5725.8 lumens
Efficiency: N/A
Efficacy: 108.6 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.21 / 1.18
Luminous Opening: Rectangular (W 0.21' x L: 4' x H: 0')
CIE Type: Semi-Direct

Input Watts (W): 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	50	30	10	0	
RCR																						
0	112	112	112	112	106	106	106	106	94	94	94	84	84	84	74	74	74	74	74	74	70	
1	105	102	99	96	99	96	94	91	87	85	83	78	77	75	70	69	68	68	68	68	64	
2	98	92	87	83	93	88	84	80	80	76	74	72	70	68	65	63	62	62	62	62	59	
3	91	84	78	73	87	80	75	71	73	69	66	67	63	61	61	58	56	56	56	56	53	
4	85	76	70	65	81	73	67	63	67	62	59	61	58	55	56	53	51	51	51	51	48	
5	80	70	63	58	76	67	61	56	62	57	53	57	53	50	52	49	47	47	47	47	44	
6	74	64	57	52	71	61	55	51	57	52	48	52	48	45	48	45	43	43	43	43	40	
7	70	59	52	47	66	57	50	46	52	47	43	49	44	41	45	42	39	39	39	39	37	
8	65	54	47	43	62	52	46	42	49	43	40	45	41	38	42	38	36	36	36	36	34	
9	61	50	43	39	58	48	42	38	45	40	36	42	38	35	39	36	33	33	33	33	31	
10	58	47	40	36	55	45	39	35	42	37	33	39	35	32	37	33	31	31	31	31	29	

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	33609	33609	33609
5°	33158	33869	34396
10°	33728	34580	34953
15°	34659	35175	35230
20°	34816	35208	34621
25°	34015	34392	33639
30°	32204	32567	31629
35°	29274	29274	28665
40°	24077	23837	23325
45°	14396	16919	13728
50°	4654	9429	4367
55°	1646	3157	1646
60°	106	891	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: 16919 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	250.3	4.4
10°-20°	740.7	12.9
20°-30°	1096.2	19.1
30°-40°	1133.0	19.8
40°-50°	659.2	11.5
50°-60°	111.7	2.0
60°-70°	4.4	0.1
70°-80°	0.6	0.0
80°-90°	1.3	0.0
90°-100°	39.6	0.7
100°-110°	281.9	4.9
110°-120°	382.7	6.7
120°-130°	311.5	5.4
130°-140°	250.5	4.4
140°-150°	197.5	3.4
150°-160°	144.4	2.5
160°-170°	89.7	1.6
170°-180°	30.6	0.5
0°-30°	2087.2	36.5
0°-40°	3220.2	56.2
0°-60°	3991.1	69.7
0°-90°	3997.4	69.8
90°-120°	704.2	12.3
90°-150°	1463.7	25.6
90°-180°	1728.0	30.2
0°-180°	5725.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2602	2602	2602	2602	2602	
5°	2557	2625	2612	2619	2653	245
15°	2592	2683	2630	2617	2634	729
25°	2387	2466	2413	2340	2360	1090
35°	1856	1886	1856	1810	1818	1137
45°	788	917	926	894	752	609
55°	73	85	140	79	73	81
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	30	16	18	22	18
105°	63	96	366	468	310	66
115°	111	135	316	656	767	110
125°	160	182	298	520	615	142
135°	198	220	300	428	492	153
145°	235	254	302	373	413	147
155°	275	285	308	338	354	126
165°	306	310	316	324	330	86
175°	322	324	322	320	318	30
180°	322	322	322	322	322	



TEST NUMBER: P644627

CATALOG NUMBER: OMN4DIP-SR4F0-100D50U940-BBMOOB-1DUDD-WW

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2602.0	2602.0	2602.0	2602.0	2602.0
2.5°	2567.8	2618.7	2600.3	2602.3	2615.0
5°	2557.3	2624.8	2612.1	2619.0	2652.8
7.5°	2565.0	2633.3	2631.6	2633.6	2666.6
10°	2571.5	2643.0	2636.5	2635.2	2664.9
12.5°	2584.5	2662.4	2636.5	2633.4	2658.4
15°	2591.8	2683.2	2630.4	2616.6	2634.5
17.5°	2567.0	2668.7	2597.1	2560.3	2567.4
20°	2532.9	2636.2	2561.4	2506.8	2518.7
22.5°	2479.3	2577.8	2511.0	2443.5	2458.6
25°	2386.7	2466.1	2413.1	2340.4	2360.3
27.5°	2255.0	2317.8	2284.3	2213.9	2226.2
30°	2159.2	2210.8	2183.5	2114.6	2120.6
32.5°	2048.7	2092.4	2063.3	2004.0	2003.6
35°	1856.5	1886.3	1856.5	1810.0	1817.9
37.5°	1605.1	1627.7	1597.3	1569.4	1573.4
40°	1427.9	1445.8	1413.7	1387.2	1383.3
42.5°	1206.9	1256.6	1225.2	1189.2	1194.8
45°	788.1	917.2	926.2	894.5	751.5
47.5°	397.3	538.3	644.7	489.2	350.6
50°	231.6	317.0	469.2	259.0	217.3
52.5°	151.9	188.1	327.8	163.7	144.2
55°	73.1	85.0	140.2	79.1	73.1
57.5°	25.2	38.7	62.2	39.5	28.0
60°	4.1	16.0	34.5	12.0	2.0
62.5°	2.4	4.8	21.5	2.4	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	2.0	0.0	0.0	0.0
77.5°	0.0	2.0	0.0	0.0	0.0
80°	0.0	2.0	0.0	0.0	0.0
82.5°	0.0	2.0	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	2.0	4.0	6.1	6.1
92.5°	4.9	6.8	8.9	12.6	14.2
95°	16.2	30.0	16.2	18.3	22.3
97.5°	28.7	57.6	119.0	35.1	30.4
100°	38.4	72.1	238.8	70.3	46.5
102.5°	48.2	83.4	323.0	185.5	101.6
105°	62.7	96.4	366.3	467.9	309.6
107.5°	77.3	102.6	349.7	681.0	637.8
110°	87.0	110.8	340.0	715.5	769.0

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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	96.7	120.5	330.2	695.3	785.1
115°	111.3	135.0	315.7	656.1	766.9
117.5°	126.3	149.6	312.0	613.7	727.7
120°	137.6	159.4	305.6	581.4	700.2
122.5°	145.7	169.0	297.5	553.7	662.9
125°	159.9	181.6	297.5	520.2	615.2
127.5°	171.6	193.8	297.9	481.3	575.1
130°	178.1	201.8	299.5	455.3	544.3
132.5°	186.2	209.9	299.5	443.6	516.8
135°	198.3	220.1	299.5	428.4	491.7
137.5°	208.4	231.8	299.5	411.6	465.8
140°	216.5	238.3	299.5	401.8	451.3
142.5°	224.6	244.8	301.1	390.4	436.7
145°	234.7	254.5	301.5	373.2	412.8
147.5°	246.9	264.3	303.9	360.9	391.4
150°	255.0	270.8	305.6	352.7	378.4
152.5°	263.1	277.3	305.6	346.1	367.1
155°	275.2	285.1	307.6	338.3	354.1
157.5°	284.9	294.4	310.0	333.3	344.8
160°	291.4	299.3	311.6	330.1	340.0
162.5°	296.2	304.2	313.2	328.4	335.1
165°	305.6	309.5	315.7	323.9	329.8
167.5°	310.8	314.4	317.7	321.8	325.4
170°	315.7	317.7	317.7	321.8	323.8
172.5°	317.3	320.9	319.3	320.2	322.2
175°	321.7	323.7	321.7	319.7	317.7
177.5°	321.7	323.3	321.7	321.7	320.1
180°	321.7	321.7	321.7	321.7	321.7

(END OF REPORT)