

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: P644662

Luminaire Tested: OMN4DIP-SR4F0-100D75U940-WBMOOB-1DUDD-WW

Issue Date: 9/2/2020



Test Information

Test Method: LM-79-2019
Report Number: P644662
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-SR4F0-100D75U940-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: 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

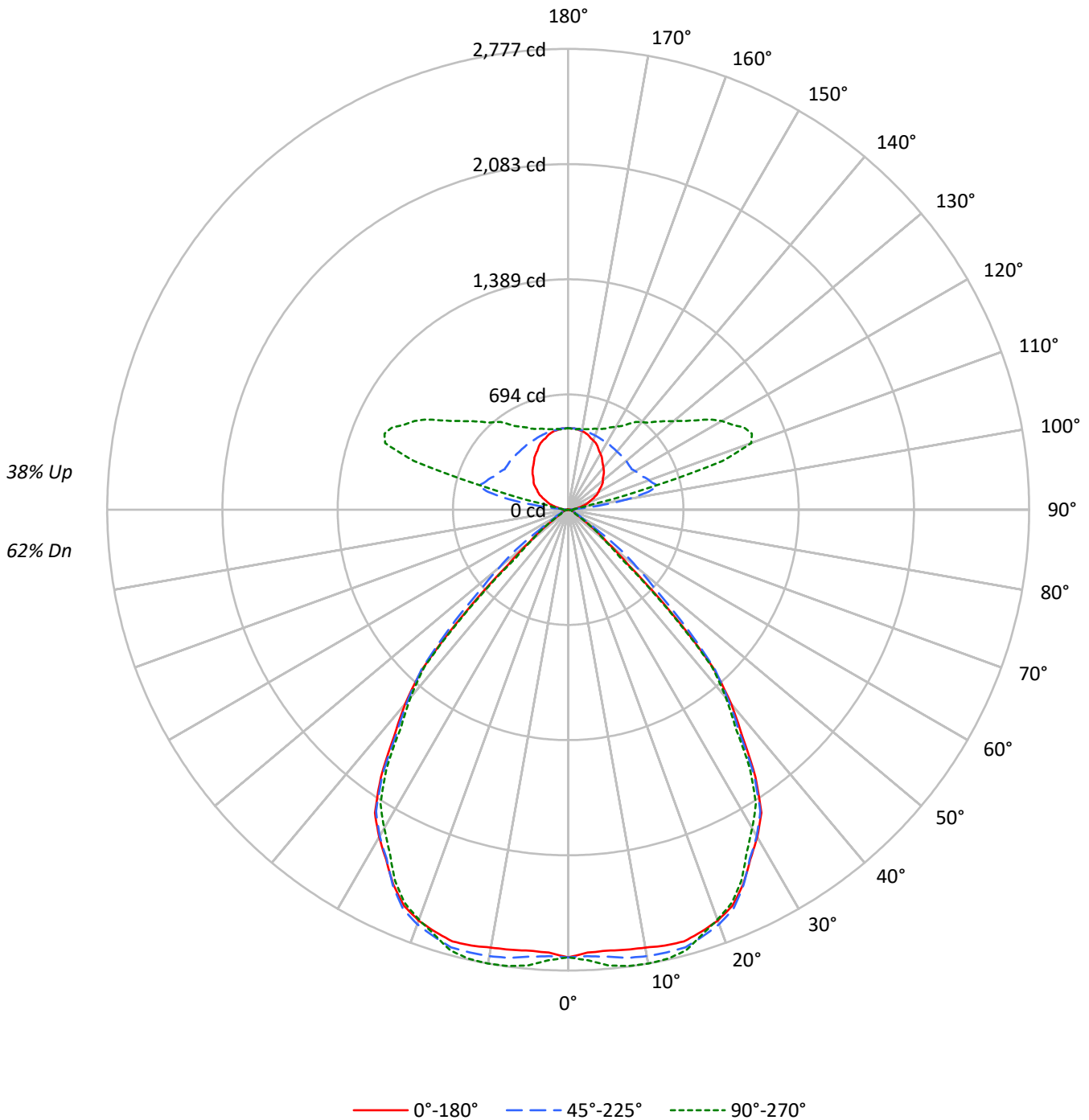
Lumens per Lamp: N/A
Luminaire Lumens: 6975.7 lumens
Efficiency: N/A
Efficacy: 118.4 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.21 / 1.19
Luminous Opening: Rectangular (W 0.21' x L: 4' x H: 0')
CIE Type: Semi-Direct

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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CATALOG NUMBER: OMN4DIP-SR4F0-100D75U940-WBMOOB-1DUDD-WW

Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	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	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°	34842	34842	34842
5°	34580	35054	35738
10°	35140	35833	36419
15°	36017	36505	36750
20°	36213	36547	36129
25°	35520	35607	35173
30°	33961	33870	33052
35°	31004	30748	30107
40°	25756	25378	24899
45°	16177	18404	15436
50°	6203	10897	5755
55°	2928	4574	2973
60°	1416	2310	1258
65°	1305	1366	1180
70°	1303	1303	1152
75°	1318	1318	1113
80°	1361	1205	1056
85°	1512	1200	904

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 18404 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	259.8	3.7
10°-20°	768.5	11.0
20°-30°	1141.6	16.4
30°-40°	1194.8	17.1
40°-50°	723.7	10.4
50°-60°	167.0	2.4
60°-70°	45.9	0.7
70°-80°	26.9	0.4
80°-90°	10.4	0.1
90°-100°	60.4	0.9
100°-110°	430.1	6.2
110°-120°	583.9	8.4
120°-130°	475.3	6.8
130°-140°	382.3	5.5
140°-150°	301.4	4.3
150°-160°	220.3	3.2
160°-170°	136.9	2.0
170°-180°	46.7	0.7
0°-30°	2169.9	31.1
0°-40°	3364.7	48.2
0°-60°	4255.4	61.0
0°-90°	4338.6	62.2
90°-120°	1074.4	15.4
90°-150°	2233.3	32.0
90°-180°	2637.0	37.8
0°-180°	6975.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2697	2697	2697	2697	2697	
5°	2667	2728	2704	2715	2756	255
15°	2693	2775	2730	2708	2748	758
25°	2492	2566	2498	2434	2468	1141
35°	1966	1996	1950	1905	1909	1208
45°	886	1007	1008	972	845	680
55°	130	148	203	140	132	135
65°	43	45	45	41	39	43
75°	26	26	26	24	22	28
85°	10	10	8	8	6	10
90°	0	3	6	9	9	2
95°	25	46	25	28	34	28
105°	96	147	559	714	472	101
115°	170	206	482	1001	1170	169
125°	244	277	454	794	939	217
135°	303	336	457	654	750	233
145°	358	388	460	570	630	225
155°	420	435	469	516	540	193
165°	466	472	482	494	503	131
175°	491	494	491	488	485	46
180°	491	491	491	491	491	

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CATALOG NUMBER: OMN4DIP-SR4F0-100D75U940-WBMOOB-1DUDD-WW

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2697.4	2697.4	2697.4	2697.4	2697.4
2.5°	2671.4	2719.1	2692.6	2694.7	2716.9
5°	2667.0	2728.5	2703.5	2714.6	2756.3
7.5°	2674.3	2738.6	2723.8	2727.7	2773.4
10°	2679.2	2746.7	2732.0	2731.0	2776.7
12.5°	2690.5	2761.2	2733.6	2727.7	2771.8
15°	2693.4	2774.8	2729.9	2708.5	2748.2
17.5°	2667.0	2756.7	2696.2	2651.8	2683.6
20°	2634.5	2725.8	2658.8	2596.6	2628.4
22.5°	2584.1	2673.9	2602.0	2534.9	2568.3
25°	2492.3	2565.8	2498.4	2434.1	2467.9
27.5°	2376.1	2427.7	2370.0	2309.1	2328.2
30°	2277.0	2328.6	2270.9	2208.1	2216.0
32.5°	2166.5	2210.2	2153.9	2097.6	2103.9
35°	1966.2	1996.0	1950.0	1905.4	1909.3
37.5°	1722.5	1726.4	1695.2	1654.6	1655.4
40°	1527.5	1539.4	1505.1	1472.7	1476.7
42.5°	1295.1	1342.0	1308.5	1279.3	1280.1
45°	885.6	1006.8	1007.5	972.1	845.0
47.5°	489.1	629.3	719.5	557.9	421.3
50°	308.7	398.1	542.3	326.1	286.4
52.5°	221.0	261.1	396.1	230.7	210.0
55°	130.0	147.9	203.1	140.0	132.0
57.5°	79.2	94.7	118.6	93.5	79.6
60°	54.8	68.7	89.4	62.7	48.7
62.5°	48.3	52.7	69.9	49.9	45.5
65°	42.7	44.6	44.7	40.6	38.6
67.5°	37.8	39.8	37.8	35.7	33.7
70°	34.5	36.5	34.5	32.5	30.5
72.5°	31.3	33.3	31.3	29.2	27.2
75°	26.4	26.4	26.4	24.3	22.3
77.5°	21.5	21.5	21.1	19.5	17.5
80°	18.3	18.3	16.2	16.2	14.2
82.5°	15.0	15.0	13.0	13.0	11.0
85°	10.2	10.2	8.1	8.1	6.1
87.5°	4.9	5.5	4.5	5.1	3.5
90°	0.0	3.0	6.2	9.3	9.3
92.5°	7.4	10.4	13.6	19.2	21.6
95°	24.7	45.8	24.7	27.9	34.0
97.5°	43.8	87.9	181.6	53.6	46.3
100°	58.7	110.0	364.3	107.2	71.0
102.5°	73.5	127.2	492.8	283.0	155.0
105°	95.7	147.0	558.9	713.9	472.4
107.5°	117.9	156.6	533.5	1039.0	973.2
110°	132.8	169.0	518.7	1091.8	1173.3



TEST NUMBER: P644662

CATALOG NUMBER: OMN4DIP-SR4F0-100D75U940-WBMOOB-1DUDD-WW

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	147.6	183.8	503.9	1060.9	<i>1198.0</i>
115°	169.8	206.0	481.7	1001.2	<i>1170.2</i>
117.5°	192.7	228.3	476.1	936.4	<i>1110.3</i>
120°	210.0	243.2	466.2	887.2	<i>1068.3</i>
122.5°	222.3	257.9	453.9	844.9	<i>1011.5</i>
125°	243.9	277.1	453.9	793.7	<i>938.6</i>
127.5°	261.8	295.6	454.5	734.4	<i>877.5</i>
130°	271.7	307.9	457.0	694.7	<i>830.6</i>
132.5°	284.1	320.3	457.0	676.9	<i>788.6</i>
135°	302.6	335.8	457.0	653.7	<i>750.3</i>
137.5°	318.0	353.7	457.0	628.1	<i>710.8</i>
140°	330.4	363.6	457.0	613.1	<i>688.5</i>
142.5°	342.7	373.5	459.4	595.7	<i>666.3</i>
145°	358.2	388.4	460.1	569.5	<i>629.9</i>
147.5°	376.7	403.3	463.8	550.7	<i>597.2</i>
150°	389.0	413.2	466.2	538.1	<i>577.4</i>
152.5°	401.4	423.1	466.2	528.1	<i>560.1</i>
155°	419.9	435.0	469.3	516.2	<i>540.3</i>
157.5°	434.7	449.2	473.0	508.6	<i>526.1</i>
160°	444.6	456.7	475.5	503.6	<i>518.7</i>
162.5°	452.0	464.1	478.0	501.0	<i>511.3</i>
165°	466.2	472.3	481.7	494.2	<i>503.3</i>
167.5°	474.3	479.7	484.8	491.1	<i>496.5</i>
170°	481.7	484.7	484.8	491.0	<i>494.0</i>
172.5°	484.1	489.6	487.2	488.5	<i>491.6</i>
175°	490.9	494.0	490.9	487.8	<i>484.8</i>
177.5°	490.9	493.4	490.9	490.9	<i>488.5</i>
180°	490.9	490.9	490.9	490.9	<i>490.9</i>

(END OF REPORT)