

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: P645202

Luminaire Tested: OMN4DIP-SR4F0-75D75U940-WBMOOB-1DUDD-WW

Issue Date: 9/2/2020



Test Information

Test Method: LM-79-2019
Report Number: P645202
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-SR4F0-75D75U940-WBMOOB-1DUDD-WW
Description: NEO-RAY CIRQUE 4-INCH DIAMETER LINEAR LED LUMINAIRE
DOWNLIGHT - WHITE BAFFLE WITH MEDIUM OPTIC - 750 LUMENS PER FOOT
UPLIGHT - BATWING OPTIC - 750 LUMENS PER FOOT
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

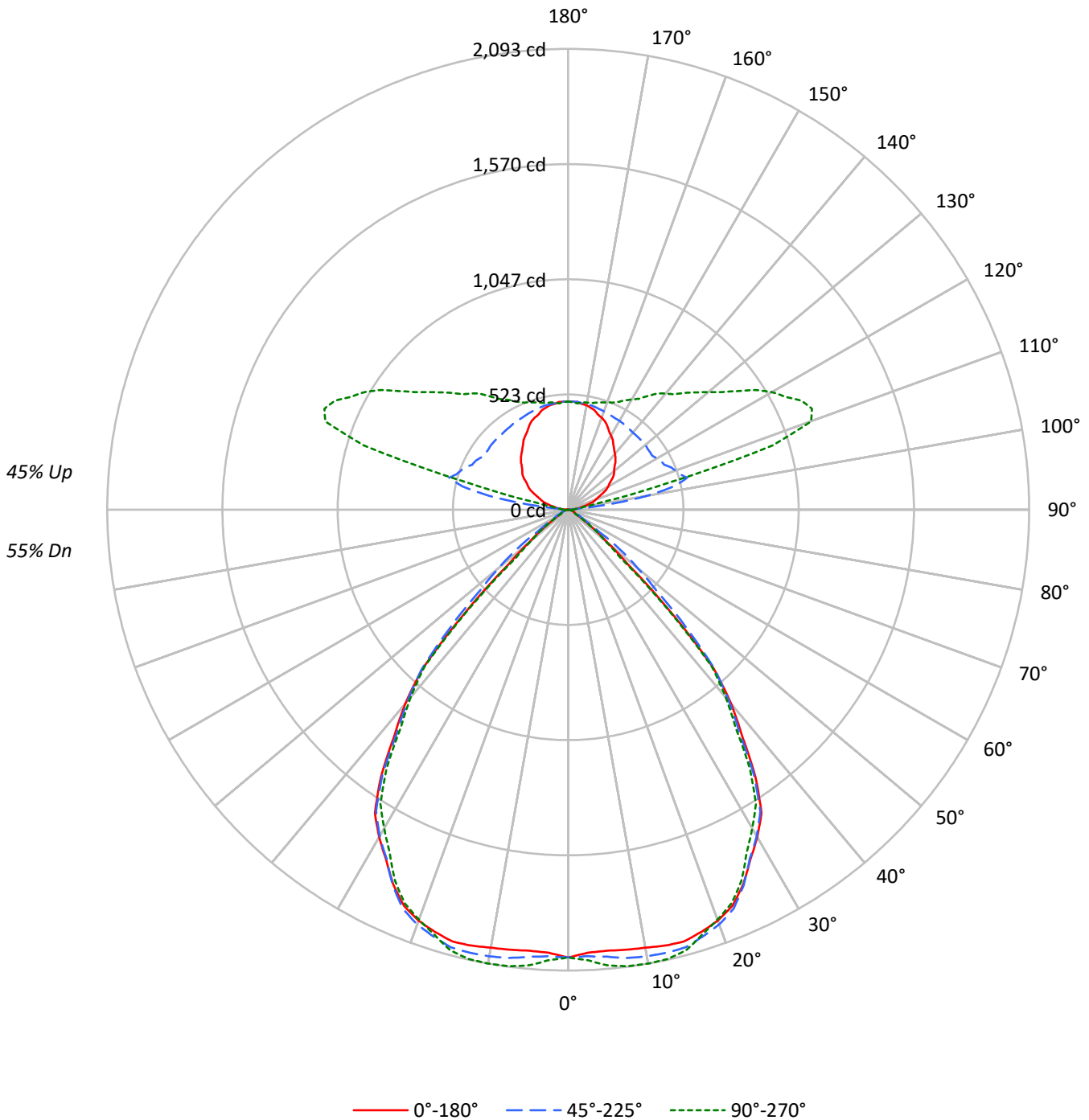
Lumens per Lamp: N/A
Luminaire Lumens: 5908.1 lumens
Efficiency: N/A
Efficacy: 121.3 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.21 / 1.19
Luminous Opening: Rectangular (W 0.21' x L: 4' x H: 0')
CIE Type: General Diffuse

Input Watts (W): 48.7
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										
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	108	108	108	108	101	101	101	101	86	86	86	73	73	73	61	61	61	55																				
1	101	97	94	91	94	91	88	86	79	77	75	67	66	65	57	56	55	51																				
2	94	87	82	78	87	82	77	74	71	68	65	62	59	57	53	51	50	46																				
3	87	79	73	68	81	74	69	64	65	61	58	57	54	51	49	47	45	41																				
4	81	71	65	59	75	67	61	57	59	55	51	52	49	46	45	43	41	37																				
5	75	65	58	52	70	61	55	50	54	49	46	48	44	41	42	39	37	34																				
6	70	59	52	47	65	56	49	45	50	45	41	44	40	37	39	36	34	31																				
7	65	54	47	42	61	51	45	40	46	41	37	41	37	34	36	33	31	28																				
8	61	50	43	38	57	47	41	36	42	37	34	38	34	31	33	30	28	26																				
9	57	46	39	34	53	43	37	33	39	34	31	35	31	28	31	28	26	24																				
10	53	42	36	31	50	40	34	30	36	31	28	33	29	26	29	26	24	22																				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	26266	26266	26266
5°	26068	26426	26942
10°	26490	27012	27454
15°	27151	27520	27705
20°	27299	27552	27236
25°	26777	26842	26514
30°	25601	25533	24917
35°	23372	23180	22697
40°	19416	19131	18770
45°	12195	13874	11636
50°	4676	8215	4338
55°	2207	3448	2241
60°	1067	1741	948
65°	984	1030	889
70°	982	982	869
75°	993	993	838
80°	1027	907	796
85°	1141	904	682

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 13874 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	195.9	3.3
10°-20°	579.3	9.8
20°-30°	860.6	14.6
30°-40°	900.7	15.2
40°-50°	545.6	9.2
50°-60°	125.9	2.1
60°-70°	34.6	0.6
70°-80°	20.3	0.3
80°-90°	8.1	0.1
90°-100°	60.4	1.0
100°-110°	430.1	7.3
110°-120°	583.9	9.9
120°-130°	475.3	8.0
130°-140°	382.3	6.5
140°-150°	301.4	5.1
150°-160°	220.3	3.7
160°-170°	136.9	2.3
170°-180°	46.7	0.8
0°-30°	1635.8	27.7
0°-40°	2536.5	42.9
0°-60°	3207.9	54.3
0°-90°	3270.9	55.4
90°-120°	1074.4	18.2
90°-150°	2233.3	37.8
90°-180°	2637.0	44.6
0°-180°	5908.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2034	2034	2034	2034	2034	
5°	2010	2057	2038	2046	2078	192
15°	2030	2092	2058	2042	2072	572
25°	1879	1934	1883	1835	1860	860
35°	1482	1505	1470	1436	1439	911
45°	668	759	760	733	637	513
55°	98	112	153	106	100	102
65°	32	34	34	31	29	32
75°	20	20	20	18	17	21
85°	8	8	6	6	5	8
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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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2033.5	2033.5	2033.5	2033.5	2033.5
2.5°	2013.9	2049.8	2029.8	2031.4	2048.2
5°	2010.5	2056.9	2038.1	2046.4	2077.9
7.5°	2016.0	2064.5	2053.4	2056.3	2090.7
10°	2019.7	2070.6	2059.5	2058.8	2093.2
12.5°	2028.3	2081.6	2060.7	2056.3	2089.5
15°	2030.4	2091.8	2058.0	2041.8	2071.8
17.5°	2010.5	2078.2	2032.6	1999.1	2023.1
20°	1986.0	2054.9	2004.4	1957.5	1981.4
22.5°	1948.0	2015.7	1961.5	1910.9	1936.1
25°	1878.8	1934.2	1883.4	1835.0	1860.4
27.5°	1791.2	1830.2	1786.6	1740.7	1755.1
30°	1716.5	1755.4	1711.9	1664.6	1670.6
32.5°	1633.2	1666.1	1623.7	1581.3	1586.0
35°	1482.2	1504.7	1470.0	1436.4	1439.4
37.5°	1298.5	1301.5	1278.0	1247.4	1248.0
40°	1151.5	1160.5	1134.6	1110.2	1113.2
42.5°	976.3	1011.6	986.4	964.4	965.0
45°	667.6	758.9	759.5	732.8	637.0
47.5°	368.7	474.4	542.4	420.6	317.6
50°	232.7	300.1	408.8	245.8	215.9
52.5°	166.6	196.8	298.6	173.9	158.3
55°	98.0	111.5	153.1	105.5	99.5
57.5°	59.7	71.4	89.4	70.5	60.0
60°	41.3	51.8	67.4	47.2	36.7
62.5°	36.4	39.7	52.7	37.6	34.3
65°	32.2	33.7	33.7	30.6	29.1
67.5°	28.5	30.0	28.5	26.9	25.4
70°	26.0	27.5	26.0	24.5	23.0
72.5°	23.6	25.1	23.6	22.0	20.5
75°	19.9	19.9	19.9	18.3	16.8
77.5°	16.2	16.2	15.9	14.7	13.2
80°	13.8	13.8	12.2	12.2	10.7
82.5°	11.3	11.3	9.8	9.8	8.3
85°	7.7	7.7	6.1	6.1	4.6
87.5°	3.7	4.3	3.7	4.3	3.1
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

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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)