

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: P645112

Luminaire Tested: OMN4DIP-SR4F0-75D150U940-WBMOOB-1DUDD-WW

Issue Date: 9/2/2020



**Test Information**

Test Method: LM-79-2019  
Report Number: P645112  
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-SR4F0-75D150U940-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 - 1500 LUMENS PER FOOT  
Light Source: 4000K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

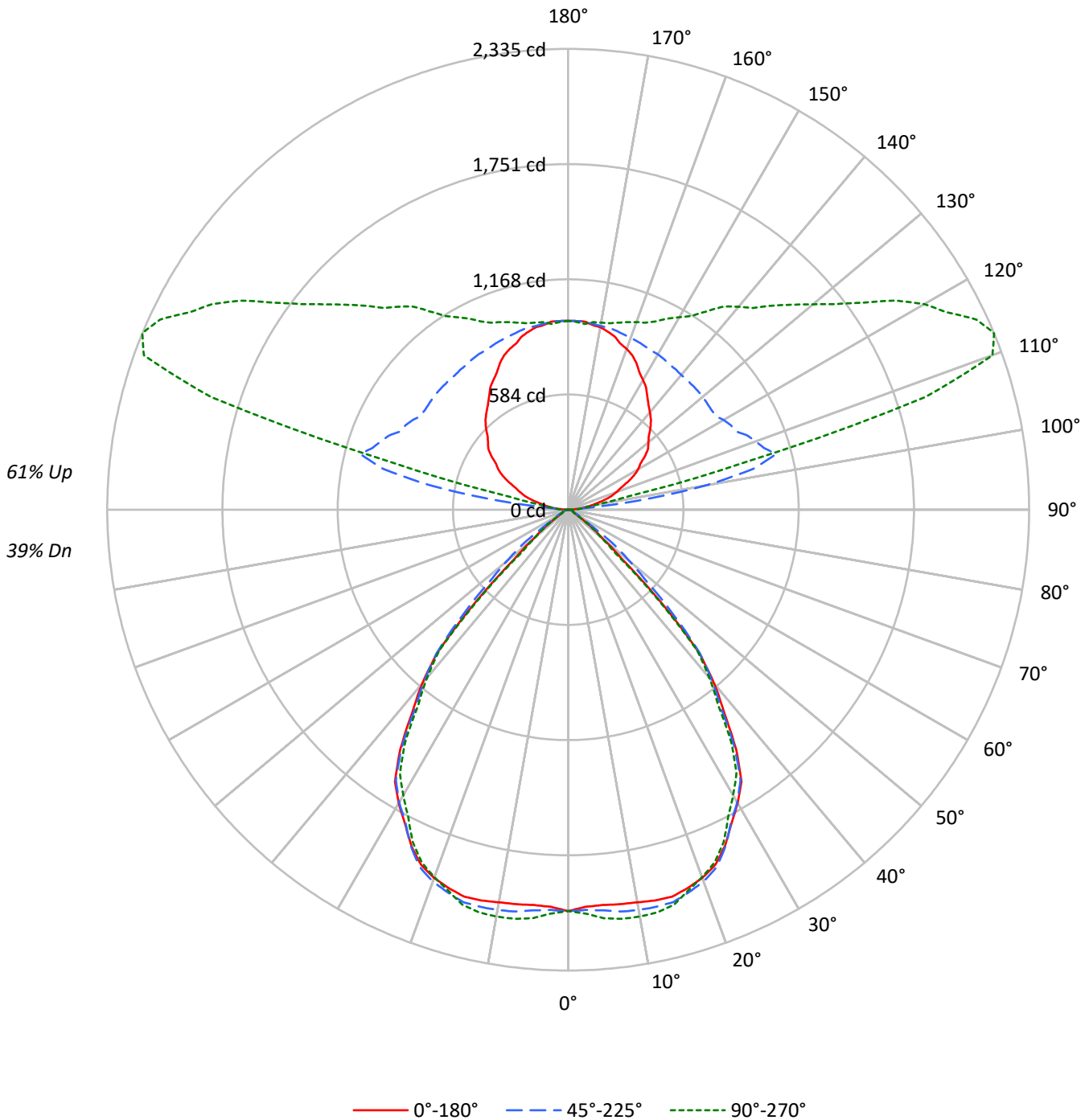
Lumens per Lamp: N/A  
Luminaire Lumens: 8412.1 lumens  
Efficiency: N/A  
Efficacy: 110.0 lumens/watt  
Spacing Criteria (0/90/45): 1.24 / 1.21 / 1.19  
Luminous Opening: Rectangular (W 0.21' x L: 4' x H: 0')  
CIE Type: Semi-Indirect

Input Watts (W): 76.5  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): 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	104	104	104	104	95	95	95	95	77	77	77	61	61	61	46	46	46	39				
1	97	93	90	87	88	85	82	80	70	68	66	56	54	53	43	42	41	36				
2	89	83	78	73	81	76	71	68	63	60	57	51	49	47	39	38	37	32				
3	82	74	68	63	75	68	63	58	57	53	50	46	44	41	36	35	33	29				
4	76	67	60	54	69	61	55	51	51	47	44	42	39	37	33	32	30	26				
5	70	60	53	48	64	55	49	45	47	42	39	39	35	33	31	29	27	24				
6	65	54	47	42	60	50	44	39	43	38	34	35	32	30	29	26	25	22				
7	61	50	42	37	55	46	40	35	39	34	31	33	29	27	26	24	23	20				
8	56	45	38	33	52	42	36	32	36	31	28	30	27	24	25	22	21	18				
9	53	42	35	30	48	39	33	28	33	28	25	28	24	22	23	21	19	17				
10	49	38	32	27	45	36	30	26	31	26	23	26	23	20	21	19	17	15				

**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	2.3
10°-20°	579.3	6.9
20°-30°	860.6	10.2
30°-40°	900.7	10.7
40°-50°	545.6	6.5
50°-60°	125.9	1.5
60°-70°	34.6	0.4
70°-80°	20.3	0.2
80°-90°	9.2	0.1
90°-100°	117.7	1.4
100°-110°	838.3	10.0
110°-120°	1138.2	13.5
120°-130°	926.4	11.0
130°-140°	745.1	8.9
140°-150°	587.4	7.0
150°-160°	429.5	5.1
160°-170°	266.8	3.2
170°-180°	91.0	1.1
0°-30°	1635.8	19.4
0°-40°	2536.5	30.2
0°-60°	3207.9	38.1
0°-90°	3272.0	38.9
90°-120°	2094.2	24.9
90°-150°	4353.0	51.7
90°-180°	5140.0	61.1
0°-180°	8412.1	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	6	12	18	18	2
95°	48	89	48	54	66	54
105°	187	287	1089	1392	921	197
115°	331	402	939	1951	2281	329
125°	475	540	885	1547	1830	422
135°	590	654	891	1274	1462	454
145°	698	757	897	1110	1228	438
155°	818	848	915	1006	1053	376
165°	909	920	939	963	981	255
175°	957	963	957	951	945	90
180°	957	957	957	957	957	

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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	4.9	4.9	6.0	4.8
90°	0.0	5.9	12.0	18.1	18.1
92.5°	14.4	20.3	26.5	37.4	42.1
95°	48.1	89.3	48.1	54.4	66.2
97.5°	85.5	171.4	353.9	104.4	90.3
100°	114.3	214.4	710.2	209.0	138.4
102.5°	143.2	248.0	960.5	551.6	302.1
105°	186.6	286.6	1089.3	1391.5	920.8
107.5°	229.9	305.2	1039.9	2025.2	1896.9
110°	258.8	329.4	1011.1	2128.0	2286.9



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	287.7	358.3	982.2	2067.9	2335.1
115°	331.0	401.6	938.8	1951.4	2280.9
117.5°	375.5	445.0	928.0	1825.2	2164.2
120°	409.2	474.0	908.8	1729.2	2082.3
122.5°	433.3	502.7	884.7	1646.7	1971.6
125°	475.4	540.2	884.7	1547.1	1829.5
127.5°	510.3	576.3	885.9	1431.5	1710.4
130°	529.6	600.2	890.7	1354.1	1618.9
132.5°	553.7	624.3	890.7	1319.3	1537.1
135°	589.8	654.5	890.7	1274.1	1462.4
137.5°	619.9	689.3	890.7	1224.2	1385.4
140°	643.9	708.7	890.7	1195.0	1342.1
142.5°	668.0	728.0	895.5	1161.0	1298.7
145°	698.1	757.0	896.7	1110.0	1227.7
147.5°	734.2	786.0	903.9	1073.3	1163.9
150°	758.3	805.4	908.8	1048.9	1125.4
152.5°	782.4	824.7	908.8	1029.3	1091.7
155°	818.5	847.9	914.8	1006.1	1053.2
157.5°	847.4	875.6	922.0	991.4	1025.5
160°	866.6	890.2	926.8	981.6	1011.1
162.5°	881.1	904.6	931.6	976.6	996.6
165°	908.8	920.5	938.8	963.3	981.0
167.5°	924.4	935.0	944.9	957.1	967.7
170°	938.8	944.7	944.9	957.0	962.9
172.5°	943.7	954.2	949.7	952.2	958.1
175°	956.9	962.8	956.9	950.7	944.9
177.5°	956.9	961.6	956.9	956.8	952.1
180°	956.9	956.9	956.9	956.9	956.9

(END OF REPORT)