

Signify Classified - Internal
Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



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: P644419

Luminaire Tested: CRQ4DIP-SR4F0-75D150U935-FLLFLL-1DUDD-WW

Issue Date: 2/20/2023



Test Information

Test Method: LM-79-2019
Report Number: P644419
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2206-689-28, G2-2206-689-14)
Test Lab: INNOVATION CENTER
Issue Date: 2/20/2023
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: CRQ4DIP-SR4F0-75D150U935-FLLFLL-1DUDD-WW
Description: NEO-RAY CIRQUE SUSPENDED LED LUMINAIRE
DOWNLIGHT - CURVED FROSTED LENS - 750 LUMENS PER FOOT
UPLIGHT - CURVED FROSTED LENS - 1500 LUMENS PER FOOT
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

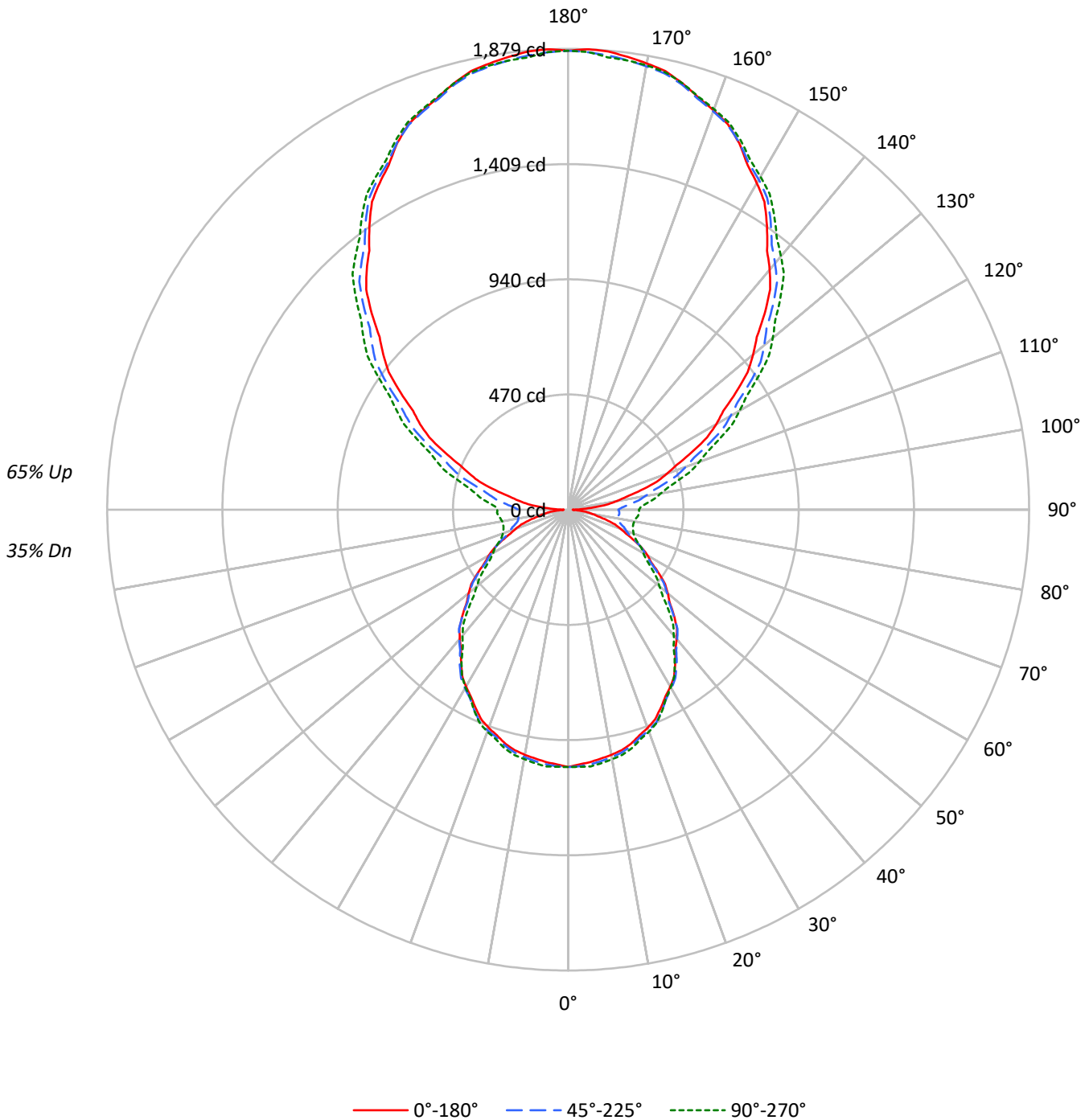
Lumens per Lamp: N/A
Luminaire Lumens: 8231.7 lumens
Efficiency: N/A
Efficacy: 116.9 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.19 / 1.3
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.33')
CIE Type: Semi-Indirect

Input Watts (W): 70.4
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	104	104	104	104	94	94	94	94	75	75	75	58	58	58	42	42	42	35																				
1	94	89	85	81	84	81	77	74	64	62	60	50	48	47	36	35	34	28																				
2	85	78	71	66	77	70	65	60	56	52	49	43	41	39	32	30	28	23																				
3	78	68	61	55	70	62	55	50	50	45	41	38	35	33	28	26	24	19																				
4	71	60	52	46	64	55	48	43	44	39	35	34	31	28	25	23	21	17																				
5	65	54	45	40	58	49	42	36	39	34	30	31	27	24	23	20	18	15																				
6	60	48	40	34	54	44	37	31	35	30	26	28	24	21	20	18	16	13																				
7	55	43	35	30	50	39	32	28	32	27	23	25	21	19	19	16	14	11																				
8	51	39	31	26	46	36	29	24	29	24	20	23	19	16	17	15	13	10																				
9	48	36	28	23	43	33	26	22	27	22	18	21	17	15	16	13	11	9																				
10	44	33	25	21	40	30	24	19	24	20	16	19	16	13	15	12	10	8																				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	16939	16939	16939
5°	16618	14956	14492
10°	16400	13332	12518
15°	16159	11939	10950
20°	15789	10712	9577
25°	15297	9546	8345
30°	14812	8475	7244
35°	14156	7476	6218
40°	13543	6513	5270
45°	12836	5600	4399
50°	12087	4782	3608
55°	11295	4014	3011
60°	10537	3332	2556
65°	9604	2782	2243
70°	8708	2353	2061
75°	7613	2118	2011
80°	6364	2053	2060
85°	4640	2166	2221

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 12836 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	99.1	1.2
10°-20°	281.3	3.4
20°-30°	415.5	5.0
30°-40°	478.5	5.8
40°-50°	464.6	5.6
50°-60°	394.0	4.8
60°-70°	305.5	3.7
70°-80°	233.8	2.8
80°-90°	204.4	2.5
90°-100°	255.5	3.1
100°-110°	419.3	5.1
110°-120°	621.2	7.5
120°-130°	804.5	9.8
130°-140°	910.4	11.1
140°-150°	899.6	10.9
150°-160°	760.9	9.2
160°-170°	506.6	6.2
170°-180°	177.2	2.2
0°-30°	795.8	9.7
0°-40°	1274.3	15.5
0°-60°	2132.8	25.9
0°-90°	2876.5	34.9
90°-120°	1296.1	15.7
90°-150°	3910.5	47.5
90°-180°	5355.0	65.1
0°-180°	8231.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1049	1049	1049	1049	1049	
5°	1033	1052	1042	1043	1051	98
15°	988	1007	996	999	1006	278
25°	892	910	904	900	905	411
35°	760	778	770	757	757	476
45°	609	621	606	587	578	469
55°	449	462	443	418	412	403
65°	296	310	303	308	310	295
75°	160	176	221	260	273	171
85°	49	106	209	269	286	52
90°	18	95	204	267	288	15
95°	104	144	252	312	325	105
105°	307	325	403	457	465	327
115°	557	582	631	669	678	553
125°	834	864	905	938	946	748
135°	1132	1158	1180	1210	1224	873
145°	1412	1430	1438	1449	1464	882
155°	1649	1659	1651	1653	1663	757
165°	1800	1808	1794	1788	1800	507
175°	1875	1883	1860	1852	1852	178
180°	1872	1872	1872	1872	1872	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1049.1	1049.1	1049.1	1049.1	1049.1
2.5°	1039.6	1054.7	1047.1	1047.9	1049.1
5°	1032.8	1051.6	1041.7	1043.3	1050.6
7.5°	1023.3	1042.2	1033.9	1033.9	1042.3
10°	1015.0	1032.4	1024.4	1025.5	1032.8
12.5°	1004.3	1023.7	1013.3	1016.0	1023.3
15°	988.3	1006.7	996.2	998.9	1006.1
17.5°	964.6	982.2	973.1	973.7	980.9
20°	946.8	963.3	957.7	955.9	963.1
22.5°	925.5	943.1	938.7	933.4	941.8
25°	892.0	910.4	903.9	899.6	905.3
27.5°	858.8	876.5	866.8	860.1	864.5
30°	832.7	849.7	841.2	832.8	837.2
32.5°	804.3	822.8	812.7	803.2	805.2
35°	760.1	777.6	770.5	757.2	757.2
37.5°	718.4	733.7	723.0	708.5	705.3
40°	687.5	704.0	691.0	674.1	669.7
42.5°	655.5	672.0	659.4	639.7	633.0
45°	609.0	620.6	606.5	586.6	577.9
47.5°	561.0	574.5	555.8	533.2	522.8
50°	529.0	542.1	524.6	497.6	486.0
52.5°	498.2	510.5	491.0	463.7	454.8
55°	449.0	462.5	442.6	417.8	412.5
57.5°	403.0	416.3	395.8	381.7	375.8
60°	373.4	385.5	366.5	357.6	353.3
62.5°	340.2	353.9	337.7	337.2	336.0
65°	296.3	309.5	302.9	308.0	310.5
67.5°	255.2	266.8	270.1	287.4	293.7
70°	226.7	238.4	251.6	275.7	283.5
72.5°	200.6	212.7	239.0	268.3	277.2
75°	160.0	175.6	220.6	260.2	272.8
77.5°	124.5	143.1	209.9	257.4	271.8
80°	100.8	128.0	206.5	257.5	273.5
82.5°	79.4	115.2	204.9	261.9	277.9
85°	48.9	105.7	208.6	268.6	286.1
87.5°	25.0	99.8	208.6	270.4	290.2
90°	18.4	95.4	204.3	267.3	288.2
92.5°	50.1	109.4	220.3	281.6	297.4
95°	104.2	143.6	251.6	312.0	325.1
97.5°	158.8	187.5	289.1	345.7	358.3
100°	198.6	221.5	317.8	373.1	383.8
102.5°	241.9	260.1	351.2	403.4	416.0
105°	306.9	325.4	402.8	456.6	465.3
107.5°	379.0	398.6	464.7	515.9	525.5
110°	427.1	450.9	509.6	556.5	567.7



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	479.5	503.4	555.7	600.2	611.4
115°	556.7	582.0	630.8	668.7	678.4
117.5°	637.6	663.8	708.3	744.4	753.7
120°	696.8	721.1	764.4	798.8	806.6
122.5°	749.2	777.0	820.0	854.5	862.2
125°	834.4	864.5	905.4	937.9	945.7
127.5°	922.0	950.8	988.5	1021.4	1031.5
130°	984.4	1009.6	1042.5	1077.1	1088.7
132.5°	1042.4	1067.7	1096.9	1131.1	1144.3
135°	1132.4	1157.7	1180.1	1210.2	1223.8
137.5°	1218.6	1243.1	1260.4	1284.2	1301.3
140°	1277.4	1298.8	1311.2	1333.4	1349.0
142.5°	1331.5	1352.8	1362.1	1381.1	1396.6
145°	1412.5	1430.0	1438.4	1448.7	1464.2
147.5°	1488.4	1505.5	1509.1	1518.1	1527.8
150°	1537.7	1553.2	1553.6	1557.8	1567.5
152.5°	1583.8	1597.8	1593.3	1596.0	1607.2
155°	1649.0	1658.7	1650.9	1653.1	1662.9
157.5°	1700.6	1710.3	1698.2	1702.0	1709.7
160°	1732.4	1742.1	1728.4	1730.6	1738.4
162.5°	1762.6	1769.2	1757.0	1754.5	1765.4
165°	1799.9	1807.7	1794.0	1788.3	1799.9
167.5°	1831.7	1839.5	1821.4	1815.3	1827.0
170°	1847.6	1855.4	1835.7	1828.0	1839.7
172.5°	1861.9	1869.7	1848.4	1839.1	1847.6
175°	1875.4	1883.2	1859.5	1851.6	1851.6
177.5°	1879.4	1884.1	1866.7	1859.0	1868.3
180°	1871.5	1871.5	1871.5	1871.5	1871.5

(END OF REPORT)