

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: P644413

Luminaire Tested: CRQ4DIP-SR4F0-75D150U835-FLLFLL-1DUDD-WW

Issue Date: 2/20/2023



Test Information

Test Method: LM-79-2019
Report Number: P644413
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-SR4F0-75D150U835-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, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

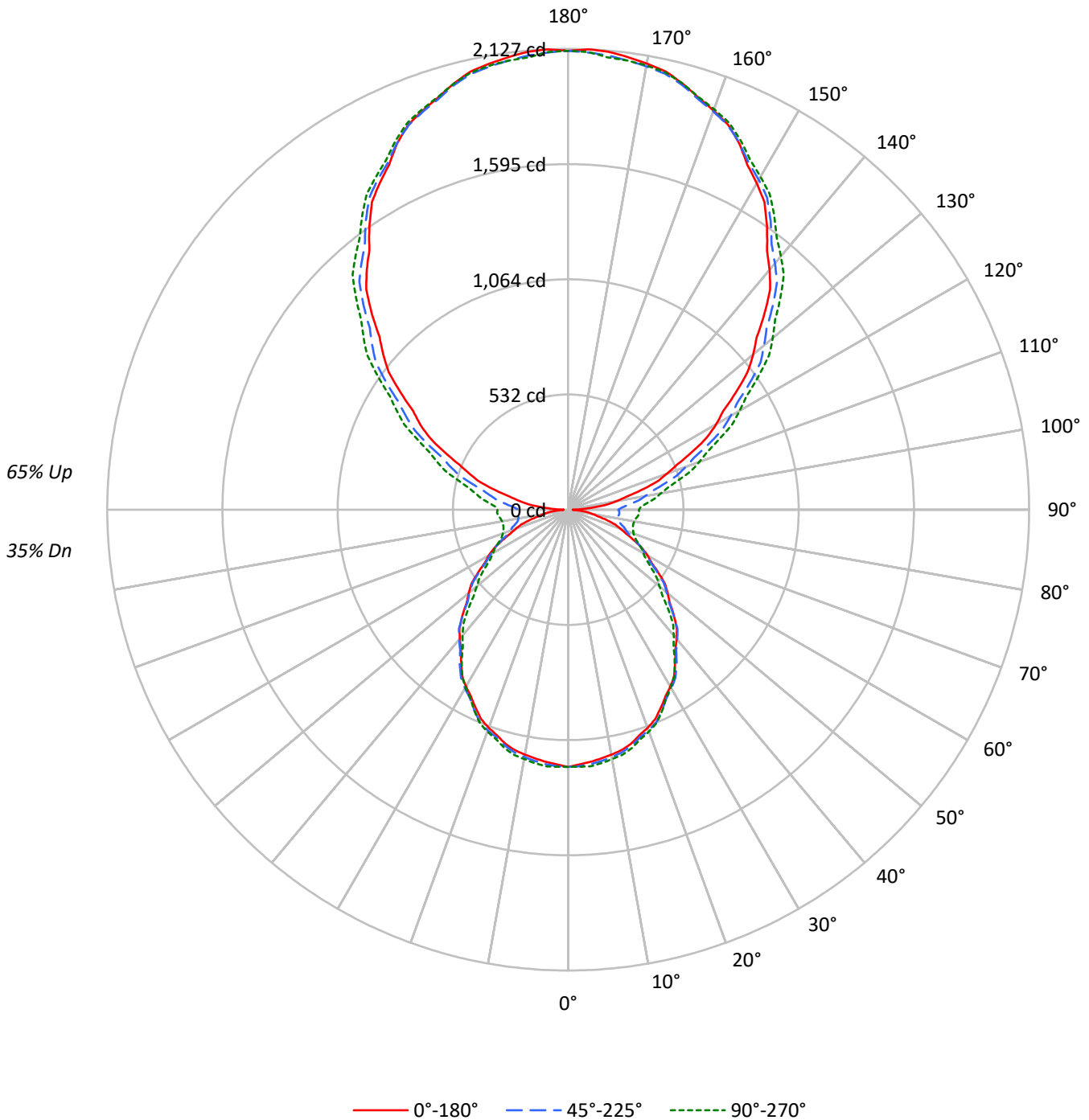
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9315.5 lumens
Efficiency: N/A
Efficacy: 132.3 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				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	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°	19168	19168	19168
5°	18806	16924	16400
10°	18559	15088	14167
15°	18288	13512	12392
20°	17869	12122	10838
25°	17311	10802	9444
30°	16763	9590	8197
35°	16020	8460	7036
40°	15328	7371	5965
45°	14526	6337	4978
50°	13678	5411	4083
55°	12782	4542	3407
60°	11925	3771	2892
65°	10871	3149	2538
70°	9857	2663	2332
75°	8617	2397	2275
80°	7198	2322	2332
85°	5247	2452	2514

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 14526 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	112.1	1.2
10°-20°	318.3	3.4
20°-30°	470.2	5.0
30°-40°	541.5	5.8
40°-50°	525.7	5.6
50°-60°	445.8	4.8
60°-70°	345.7	3.7
70°-80°	264.6	2.8
80°-90°	231.3	2.5
90°-100°	289.2	3.1
100°-110°	474.5	5.1
110°-120°	703.0	7.5
120°-130°	910.4	9.8
130°-140°	1030.3	11.1
140°-150°	1018.0	10.9
150°-160°	861.1	9.2
160°-170°	573.3	6.2
170°-180°	200.5	2.2
0°-30°	900.6	9.7
0°-40°	1442.1	15.5
0°-60°	2413.6	25.9
0°-90°	3255.2	34.9
90°-120°	1466.7	15.7
90°-150°	4425.4	47.5
90°-180°	6060.0	65.1
0°-180°	9315.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1187	1187	1187	1187	1187	
5°	1169	1190	1179	1181	1189	111
15°	1118	1139	1127	1130	1139	315
25°	1010	1030	1023	1018	1024	465
35°	860	880	872	857	857	539
45°	689	702	686	664	654	531
55°	508	523	501	473	467	456
65°	335	350	343	349	351	334
75°	181	199	250	294	309	194
85°	55	120	236	304	324	59
90°	21	108	231	302	326	17
95°	118	162	285	353	368	119
105°	347	368	456	517	527	370
115°	630	659	714	757	768	626
125°	944	978	1025	1061	1070	846
135°	1282	1310	1336	1370	1385	988
145°	1598	1618	1628	1639	1657	998
155°	1866	1877	1868	1871	1882	857
165°	2037	2046	2030	2024	2037	574
175°	2122	2131	2104	2095	2095	201
180°	2118	2118	2118	2118	2118	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1187.2	<i>1187.2</i>	1187.2	1187.2	1187.2
2.5°	1176.5	<i>1193.5</i>	1185.0	1185.9	1187.2
5°	1168.8	<i>1190.1</i>	1178.8	1180.7	1188.9
7.5°	1158.0	<i>1179.5</i>	1170.0	1170.0	1179.5
10°	1148.6	<i>1168.3</i>	1159.3	1160.6	1168.8
12.5°	1136.6	<i>1158.4</i>	1146.7	1149.8	1158.0
15°	1118.5	<i>1139.2</i>	1127.4	1130.4	1138.6
17.5°	1091.6	<i>1111.5</i>	1101.2	1101.9	1110.1
20°	1071.5	<i>1090.1</i>	1083.8	1081.7	1089.9
22.5°	1047.4	<i>1067.3</i>	1062.3	1056.3	1065.8
25°	1009.5	<i>1030.2</i>	1022.9	1018.0	1024.5
27.5°	971.9	<i>991.9</i>	981.0	973.3	978.3
30°	942.4	<i>961.5</i>	951.9	942.5	947.4
32.5°	910.2	<i>931.1</i>	919.7	908.9	911.2
35°	860.2	<i>879.9</i>	872.0	856.9	856.9
37.5°	812.9	<i>830.3</i>	818.2	801.8	798.2
40°	778.1	<i>796.7</i>	782.0	762.8	757.9
42.5°	741.8	<i>760.5</i>	746.2	723.9	716.3
45°	689.2	<i>702.3</i>	686.4	663.8	654.0
47.5°	634.9	<i>650.1</i>	628.9	603.4	591.6
50°	598.6	<i>613.4</i>	593.6	563.1	550.0
52.5°	563.8	<i>577.7</i>	555.6	524.7	514.7
55°	508.1	<i>523.4</i>	500.8	472.8	466.8
57.5°	456.1	<i>471.1</i>	447.9	431.9	425.3
60°	422.6	<i>436.3</i>	414.8	404.7	399.8
62.5°	385.0	<i>400.5</i>	382.2	381.6	380.2
65°	335.4	<i>350.2</i>	342.8	348.6	351.4
67.5°	288.8	<i>301.9</i>	305.7	325.3	332.4
70°	256.6	<i>269.7</i>	284.7	312.0	320.8
72.5°	227.0	<i>240.7</i>	270.5	303.6	313.7
75°	181.1	<i>198.7</i>	249.7	294.4	308.7
77.5°	140.9	<i>162.0</i>	237.6	291.2	307.6
80°	114.0	<i>144.8</i>	233.6	291.4	309.5
82.5°	89.9	<i>130.3</i>	231.9	296.4	314.5
85°	55.3	<i>119.6</i>	236.1	304.0	323.8
87.5°	28.3	<i>112.9</i>	236.1	306.0	328.4
90°	20.8	<i>108.0</i>	231.2	302.5	326.2
92.5°	56.7	<i>123.8</i>	249.3	318.7	336.6
95°	117.9	<i>162.5</i>	284.8	353.1	367.9
97.5°	179.7	<i>212.2</i>	327.2	391.2	405.5
100°	224.7	<i>250.6</i>	359.6	422.2	434.3
102.5°	273.7	<i>294.4</i>	397.4	456.5	470.8
105°	347.3	<i>368.2</i>	455.8	516.7	526.6
107.5°	428.9	<i>451.0</i>	525.8	583.8	594.7
110°	483.3	<i>510.3</i>	576.7	629.8	642.4



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	542.7	569.6	628.8	679.2	691.9
115°	630.0	658.6	713.8	756.8	767.8
117.5°	721.5	751.2	801.6	842.4	853.0
120°	788.5	816.0	865.0	904.0	912.8
122.5°	847.9	879.3	928.0	967.0	975.7
125°	944.2	978.3	1024.6	1061.4	1070.2
127.5°	1043.4	1075.9	1118.6	1155.9	1167.3
130°	1114.0	1142.6	1179.8	1218.9	1232.0
132.5°	1179.7	1208.2	1241.4	1280.1	1295.0
135°	1281.5	1310.1	1335.5	1369.5	1384.9
137.5°	1379.1	1406.8	1426.3	1453.3	1472.6
140°	1445.6	1469.8	1483.9	1509.0	1526.6
142.5°	1506.8	1531.0	1541.4	1562.9	1580.5
145°	1598.5	1618.3	1627.7	1639.4	1657.0
147.5°	1684.4	1703.7	1707.8	1717.9	1728.9
150°	1740.2	1757.7	1758.1	1762.9	1773.9
152.5°	1792.3	1808.1	1803.1	1806.1	1818.8
155°	1866.1	1877.1	1868.3	1870.8	1881.8
157.5°	1924.5	1935.5	1921.8	1926.1	1934.9
160°	1960.5	1971.5	1956.0	1958.4	1967.2
162.5°	1994.7	2002.1	1988.4	1985.5	1997.8
165°	2036.9	2045.7	2030.2	2023.7	2036.9
167.5°	2072.9	2081.7	2061.2	2054.3	2067.5
170°	2090.9	2099.7	2077.4	2068.7	2081.9
172.5°	2107.1	2115.9	2091.8	2081.2	2090.9
175°	2122.4	2131.2	2104.4	2095.4	2095.4
177.5°	2126.9	2132.1	2112.5	2103.7	2114.3
180°	2117.9	2117.9	2117.9	2117.9	2117.9

(END OF REPORT)