

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: P644411

Luminaire Tested: CRQ4DIP-SR4F0-75D150U830-FLLFLL-1DUDD-WW

Issue Date: 2/20/2023



Test Information

Test Method: LM-79-2019
Report Number: P644411
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-SR4F0-75D150U830-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: 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

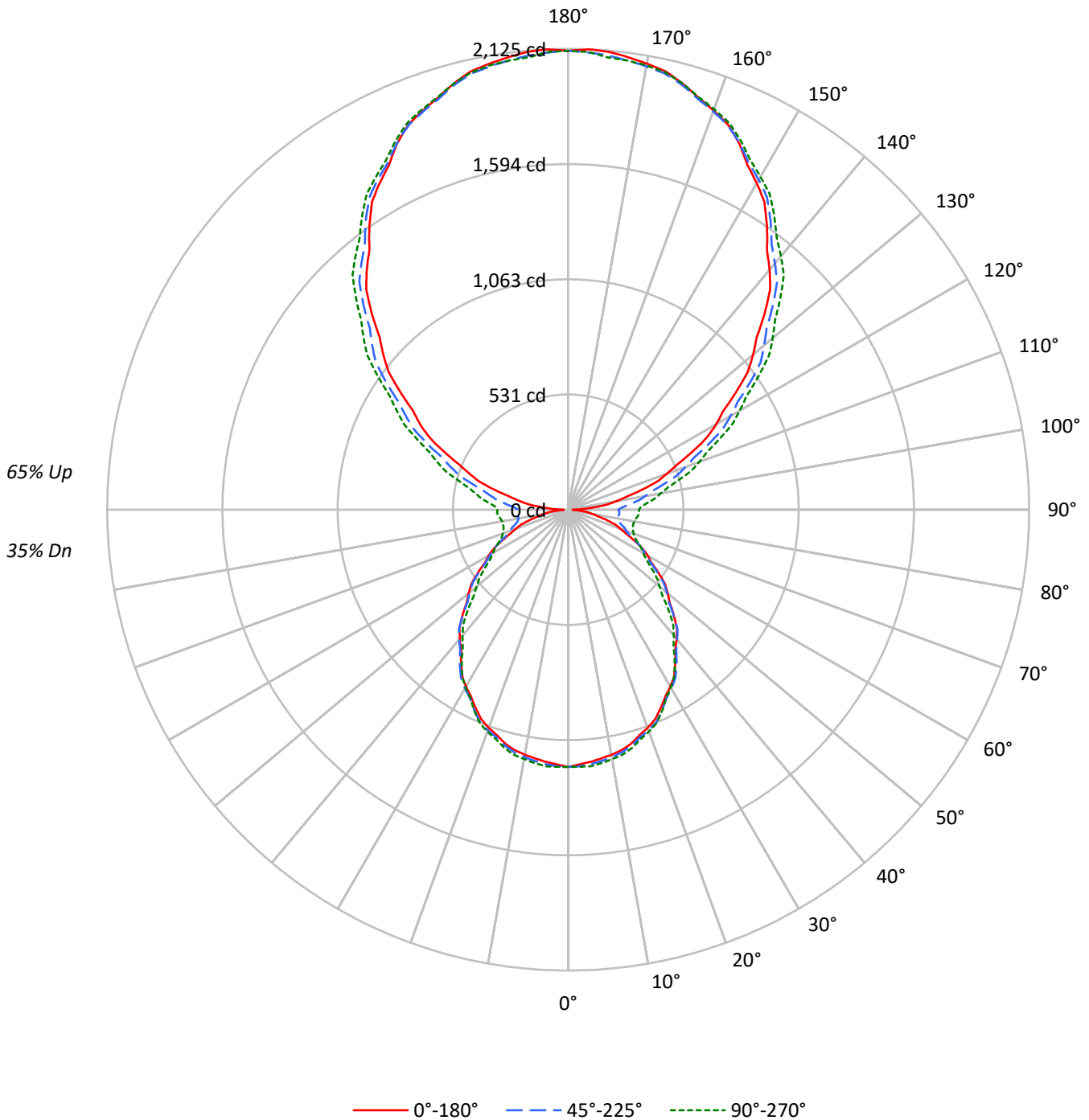
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9307.1 lumens
Efficiency: N/A
Efficacy: 132.2 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 (A_{in}): 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	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°	19151	19151	19151
5°	18789	16910	16384
10°	18542	15073	14153
15°	18270	13500	12380
20°	17852	12111	10829
25°	17294	10792	9436
30°	16747	9582	8190
35°	16005	8453	7030
40°	15314	7364	5959
45°	14514	6332	4973
50°	13666	5406	4079
55°	12769	4538	3405
60°	11914	3768	2890
65°	10861	3145	2536
70°	9845	2661	2329
75°	8608	2394	2273
80°	7192	2320	2329
85°	5247	2450	2512

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 14514 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	112.0	1.2
10°-20°	318.0	3.4
20°-30°	469.8	5.0
30°-40°	541.0	5.8
40°-50°	525.2	5.6
50°-60°	445.4	4.8
60°-70°	345.4	3.7
70°-80°	264.3	2.8
80°-90°	231.1	2.5
90°-100°	288.9	3.1
100°-110°	474.1	5.1
110°-120°	702.4	7.5
120°-130°	909.5	9.8
130°-140°	1029.4	11.1
140°-150°	1017.1	10.9
150°-160°	860.3	9.2
160°-170°	572.8	6.2
170°-180°	200.3	2.2
0°-30°	899.8	9.7
0°-40°	1440.8	15.5
0°-60°	2411.4	25.9
0°-90°	3252.3	34.9
90°-120°	1465.4	15.7
90°-150°	4421.4	47.5
90°-180°	6055.0	65.1
0°-180°	9307.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1186	1186	1186	1186	1186	
5°	1168	1189	1178	1180	1188	111
15°	1117	1138	1126	1129	1138	314
25°	1008	1029	1022	1017	1024	465
35°	859	879	871	856	856	538
45°	689	702	686	663	653	531
55°	508	523	500	472	466	455
65°	335	350	342	348	351	333
75°	181	198	249	294	308	193
85°	55	120	236	304	324	59
90°	21	108	231	302	326	17
95°	118	162	284	353	368	119
105°	347	368	455	516	526	370
115°	629	658	713	756	767	625
125°	943	977	1024	1060	1069	846
135°	1280	1309	1334	1368	1384	987
145°	1597	1617	1626	1638	1656	998
155°	1864	1875	1867	1869	1880	856
165°	2035	2044	2028	2022	2035	574
175°	2120	2129	2102	2094	2094	201
180°	2116	2116	2116	2116	2116	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1186.1	1186.1	1186.1	1186.1	1186.1
2.5°	1175.4	1192.4	1183.9	1184.8	1186.1
5°	1167.7	1189.0	1177.8	1179.6	1187.8
7.5°	1157.0	1178.4	1168.9	1168.9	1178.4
10°	1147.6	1167.3	1158.2	1159.5	1167.7
12.5°	1135.5	1157.4	1145.7	1148.8	1157.0
15°	1117.4	1138.2	1126.4	1129.4	1137.5
17.5°	1090.6	1110.5	1100.3	1100.9	1109.1
20°	1070.5	1089.1	1082.8	1080.8	1089.0
22.5°	1046.4	1066.3	1061.4	1055.3	1064.8
25°	1008.5	1029.3	1021.9	1017.1	1023.6
27.5°	971.0	991.0	980.1	972.5	977.4
30°	941.5	960.7	951.1	941.6	946.6
32.5°	909.4	930.3	918.9	908.1	910.4
35°	859.4	879.1	871.2	856.1	856.1
37.5°	812.2	829.5	817.5	801.1	797.5
40°	777.4	796.0	781.3	762.2	757.2
42.5°	741.2	759.8	745.5	723.2	715.7
45°	688.6	701.7	685.8	663.2	653.4
47.5°	634.3	649.5	628.4	602.8	591.1
50°	598.1	612.9	593.1	562.6	549.5
52.5°	563.2	577.2	555.1	524.3	514.2
55°	507.6	523.0	500.4	472.3	466.4
57.5°	455.7	470.7	447.5	431.5	424.9
60°	422.2	435.9	414.4	404.4	399.5
62.5°	384.7	400.1	381.8	381.3	379.9
65°	335.1	349.9	342.4	348.3	351.1
67.5°	288.5	301.7	305.4	325.0	332.1
70°	256.3	269.5	284.5	311.7	320.5
72.5°	226.8	240.5	270.2	303.3	313.4
75°	180.9	198.5	249.4	294.1	308.4
77.5°	140.7	161.8	237.4	291.0	307.3
80°	113.9	144.7	233.4	291.1	309.2
82.5°	89.8	130.2	231.7	296.1	314.3
85°	55.3	119.5	235.9	303.7	323.5
87.5°	28.3	112.8	235.9	305.8	328.1
90°	20.7	107.9	231.0	302.3	325.9
92.5°	56.7	123.7	249.1	318.4	336.2
95°	117.8	162.3	284.5	352.7	367.6
97.5°	179.6	212.0	326.9	390.9	405.1
100°	224.5	250.4	359.3	421.8	433.9
102.5°	273.5	294.1	397.1	456.1	470.3
105°	347.0	367.9	455.4	516.2	526.1
107.5°	428.5	450.6	525.4	583.3	594.2
110°	482.9	509.8	576.1	629.2	641.8



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	542.2	569.1	628.3	678.6	691.2
115°	629.4	658.0	713.2	756.1	767.1
117.5°	720.9	750.6	800.9	841.7	852.2
120°	787.8	815.3	864.2	903.2	912.0
122.5°	847.1	878.6	927.1	966.1	974.9
125°	943.4	977.4	1023.7	1060.4	1069.2
127.5°	1042.5	1075.0	1117.6	1154.8	1166.2
130°	1113.0	1141.5	1178.7	1217.8	1230.9
132.5°	1178.6	1207.1	1240.3	1278.9	1293.8
135°	1280.4	1308.9	1334.3	1368.3	1383.7
137.5°	1377.8	1405.5	1425.0	1452.0	1471.3
140°	1444.3	1468.5	1482.5	1507.6	1525.2
142.5°	1505.4	1529.6	1540.0	1561.5	1579.1
145°	1597.1	1616.8	1626.3	1637.9	1655.5
147.5°	1682.9	1702.2	1706.2	1716.4	1727.4
150°	1738.6	1756.2	1756.6	1761.3	1772.3
152.5°	1790.7	1806.5	1801.5	1804.5	1817.2
155°	1864.4	1875.4	1866.6	1869.1	1880.1
157.5°	1922.8	1933.8	1920.1	1924.3	1933.1
160°	1958.7	1969.7	1954.2	1956.7	1965.5
162.5°	1992.9	2000.3	1986.6	1983.7	1996.0
165°	2035.1	2043.9	2028.4	2021.9	2035.1
167.5°	2071.0	2079.8	2059.4	2052.5	2065.6
170°	2089.0	2097.8	2075.5	2066.8	2080.0
172.5°	2105.2	2114.0	2089.9	2079.3	2089.0
175°	2120.4	2129.2	2102.5	2093.5	2093.5
177.5°	2124.9	2130.2	2110.6	2101.8	2112.4
180°	2116.0	2116.0	2116.0	2116.0	2116.0

(END OF REPORT)