

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: P644195

Luminaire Tested: CRQ4DIP-SR4F0-100D150U830-FLLFLL-1DUDD-WW

Issue Date: 2/20/2023



Test Information

Test Method: LM-79-2019
Report Number: P644195
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-SR4F0-100D150U830-FLLFLL-1DUDD-WW
Description: NEO-RAY CIRQUE SUSPENDED LED LUMINAIRE
DOWNLIGHT - CURVED FROSTED LENS - 1000 LUMENS PER FOOT
UPLIGHT - CURVED FROSTED LENS - 1500 LUMENS PER FOOT
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

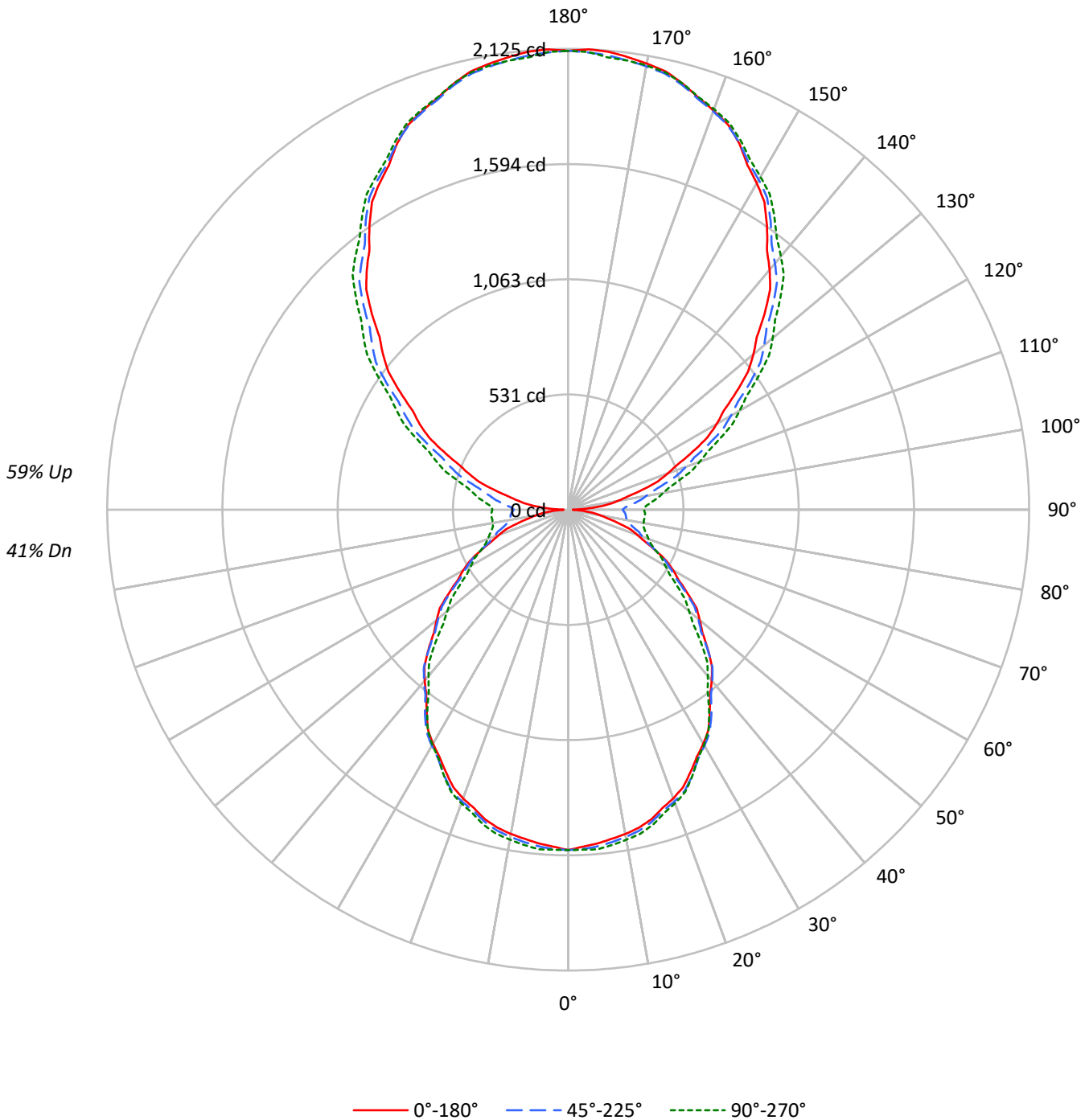
Lumens per Lamp: N/A
Luminaire Lumens: 10295.0 lumens
Efficiency: N/A
Efficacy: 131.1 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.19 / 1.3
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.33')
CIE Type: General Diffuse

Input Watts (W): 78.5
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									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	105	105	105	105	96	96	96	96	78	78	78	62	62	62	48	48	48	41																			
1	95	90	86	83	86	82	79	76	68	65	63	54	52	50	41	40	39	33																			
2	86	79	73	67	78	72	67	62	59	55	52	47	44	42	36	34	33	27																			
3	79	69	62	56	71	63	57	52	52	47	43	42	38	35	32	30	28	23																			
4	72	61	53	47	65	56	49	44	46	41	37	37	33	30	29	26	24	20																			
5	66	54	46	40	60	50	43	37	41	36	32	33	29	26	26	23	21	17																			
6	61	49	41	35	55	45	38	33	37	32	28	30	26	23	23	21	18	15																			
7	56	44	36	31	51	40	33	29	34	28	24	27	23	20	21	18	16	14																			
8	52	40	32	27	47	37	30	25	31	25	22	25	21	18	20	17	15	12																			
9	49	36	29	24	44	34	27	22	28	23	19	23	19	16	18	15	13	11																			
10	45	33	26	21	41	31	24	20	26	21	17	21	17	15	17	14	12	10																			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	25339	25339	25339
5°	24859	22373	21678
10°	24534	19934	18726
15°	24174	17852	16380
20°	23620	16017	14327
25°	22883	14279	12484
30°	22158	12663	10836
35°	21177	11163	9301
40°	20261	9737	7885
45°	19201	8370	6580
50°	18081	7133	5397
55°	16894	5991	4467
60°	15763	4959	3739
65°	14368	4095	3208
70°	13026	3404	2861
75°	11392	2967	2692
80°	9515	2745	2655
85°	6936	2759	2759

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 19201 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	148.2	1.4
10°-20°	420.7	4.1
20°-30°	621.3	6.0
30°-40°	715.2	6.9
40°-50°	694.2	6.7
50°-60°	586.9	5.7
60°-70°	447.3	4.3
70°-80°	326.6	3.2
80°-90°	261.3	2.5
90°-100°	300.9	2.9
100°-110°	478.4	4.6
110°-120°	703.9	6.8
120°-130°	910.2	8.8
130°-140°	1029.5	10.0
140°-150°	1017.1	9.9
150°-160°	860.3	8.4
160°-170°	572.8	5.6
170°-180°	200.3	1.9
0°-30°	1190.1	11.6
0°-40°	1905.3	18.5
0°-60°	3186.4	31.0
0°-90°	4221.7	41.0
90°-120°	1483.2	14.4
90°-150°	4439.9	43.1
90°-180°	6073.0	59.0
0°-180°	10295.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1569	1569	1569	1569	1569	
5°	1545	1573	1558	1561	1572	147
15°	1478	1504	1490	1494	1505	416
25°	1334	1360	1352	1346	1354	615
35°	1137	1161	1150	1133	1133	712
45°	911	926	907	878	864	702
55°	672	689	661	623	612	602
65°	443	459	446	444	444	441
75°	239	257	309	352	365	256
85°	73	141	266	336	355	78
90°	22	118	250	325	349	19
95°	123	167	296	368	383	124
105°	352	370	458	521	532	376
115°	633	660	714	757	768	629
125°	946	979	1024	1060	1069	847
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°	1569.4	1569.4	1569.4	1569.4	1569.4
2.5°	1555.2	1577.7	1565.8	1567.6	1569.4
5°	1545.0	1573.1	1558.3	1560.7	1571.6
7.5°	1530.8	1558.5	1545.9	1546.6	1559.2
10°	1518.4	1544.4	1531.7	1534.1	1545.0
12.5°	1502.4	1530.2	1515.7	1519.9	1530.8
15°	1478.5	1504.5	1489.6	1494.2	1505.1
17.5°	1443.0	1468.6	1455.0	1456.6	1467.4
20°	1416.4	1440.3	1432.0	1430.0	1440.8
22.5°	1384.5	1410.1	1403.6	1396.3	1408.9
25°	1334.4	1360.5	1352.1	1345.7	1354.3
27.5°	1284.7	1308.7	1295.9	1286.7	1293.2
30°	1245.7	1269.6	1256.9	1245.9	1252.4
32.5°	1203.2	1228.8	1214.3	1201.5	1204.5
35°	1137.1	1161.0	1150.5	1132.7	1132.7
37.5°	1074.6	1094.7	1080.8	1059.9	1055.1
40°	1028.5	1050.3	1033.0	1008.4	1001.9
42.5°	980.6	1002.4	985.1	956.9	946.9
45°	911.0	926.3	906.6	877.5	864.5
47.5°	839.2	856.7	830.4	797.6	782.0
50°	791.3	808.8	782.5	744.4	727.0
52.5°	745.2	760.9	732.9	693.1	679.2
55°	671.6	689.1	660.6	622.7	612.0
57.5°	602.9	619.9	589.7	564.4	554.0
60°	558.6	573.9	545.4	525.5	516.9
62.5°	508.9	526.0	501.1	492.0	487.0
65°	443.3	458.7	445.8	444.0	444.1
67.5°	381.7	394.9	394.1	408.0	412.9
70°	339.1	352.3	364.0	386.9	393.6
72.5°	300.1	313.3	341.1	371.1	379.6
75°	239.4	257.0	309.0	352.0	365.3
77.5°	186.2	206.4	286.6	340.0	355.8
80°	150.7	181.5	276.2	334.9	352.5
82.5°	118.8	160.1	269.3	335.2	352.8
85°	73.1	141.0	265.7	335.6	355.4
87.5°	36.4	127.4	259.3	332.0	354.4
90°	22.4	118.5	250.5	325.0	349.1
92.5°	60.0	131.8	265.1	337.7	356.5
95°	123.2	167.2	295.9	367.9	383.2
97.5°	186.1	215.3	335.1	402.2	417.1
100°	231.0	253.2	365.8	431.1	444.2
102.5°	279.5	296.4	401.8	463.6	478.5
105°	352.4	370.1	458.1	521.1	532.0
107.5°	433.3	452.3	526.9	586.4	597.8
110°	487.2	511.5	577.2	631.4	644.5

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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	546.5	570.8	629.3	679.9	693.1
115°	633.2	659.7	714.2	757.2	768.2
117.5°	724.0	752.2	801.9	842.1	852.6
120°	790.5	816.9	864.8	903.2	912.0
122.5°	849.8	879.8	927.7	966.1	974.9
125°	945.5	978.6	1024.3	1060.4	1069.2
127.5°	1044.0	1076.1	1118.1	1154.8	1166.2
130°	1114.1	1142.6	1179.2	1217.8	1230.9
132.5°	1178.8	1207.4	1240.4	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)