

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: P644205

Luminaire Tested: CRQ4DIP-SR4F0-100D150U940-FLLFLL-1DUDD-WW

Issue Date: 2/20/2023



Test Information

Test Method: LM-79-2019
Report Number: P644205
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-SR4F0-100D150U940-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: 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

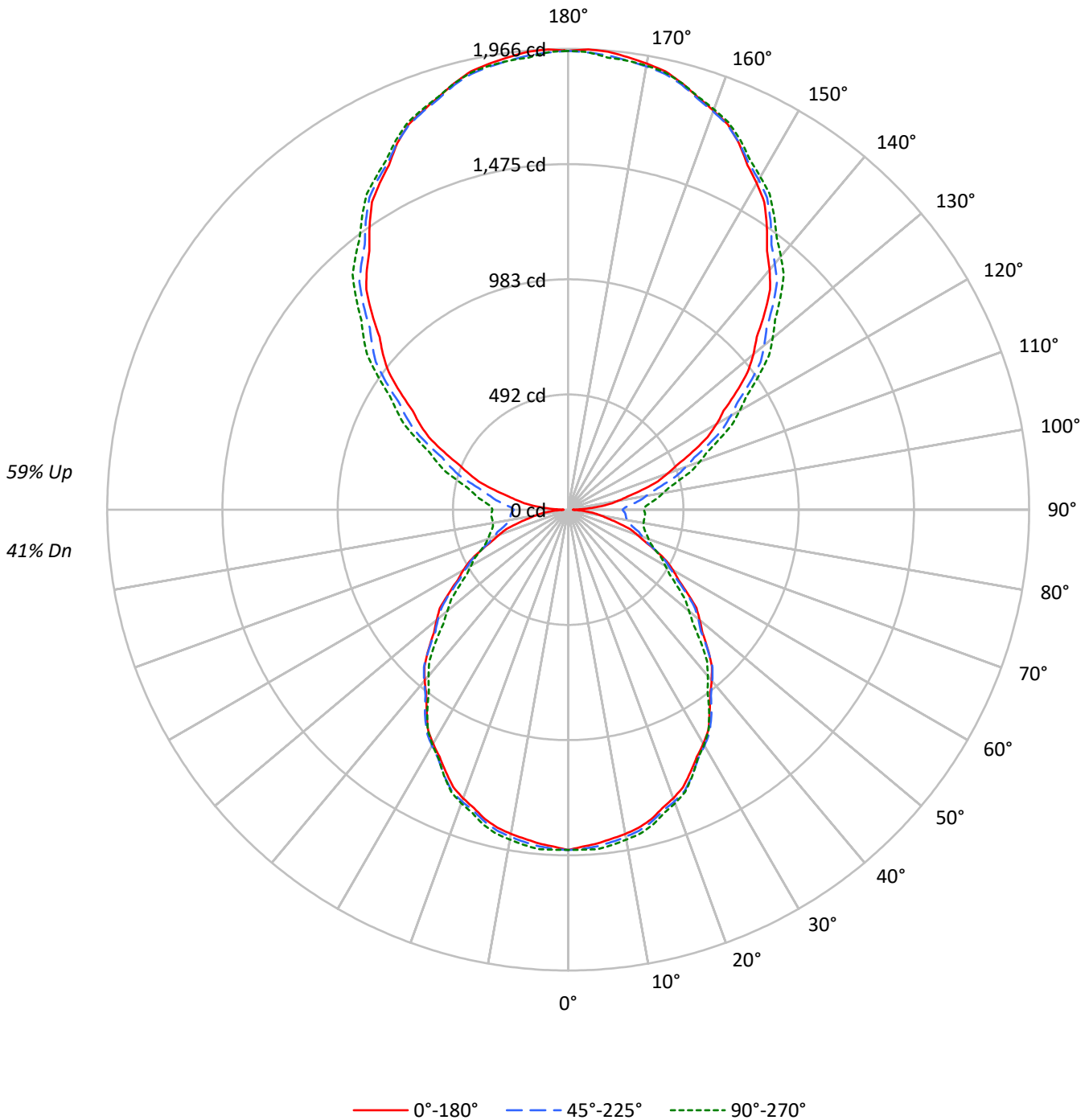
Lumens per Lamp: N/A
Luminaire Lumens: 9522.9 lumens
Efficiency: N/A
Efficacy: 121.3 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.19 / 1.3
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.33')
CIE Type: General Diffuse

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

TEST NUMBER: P644205

CATALOG NUMBER: CRQ4DIP-SR4F0-100D150U940-FLLFLL-1DUDD-WW

Luminous Intensity Polar Plot





TEST NUMBER: P644205

CATALOG NUMBER: CRQ4DIP-SR4F0-100D150U940-FLLFLL-1DUDD-WW

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	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°	23439	23439	23439
5°	22995	20694	20052
10°	22693	18439	17321
15°	22361	16514	15152
20°	21849	14816	13252
25°	21167	13208	11548
30°	20497	11713	10024
35°	19588	10325	8603
40°	18742	9006	7294
45°	17762	7743	6086
50°	16726	6599	4993
55°	15629	5542	4132
60°	14581	4587	3459
65°	13292	3788	2967
70°	12050	3149	2646
75°	10535	2744	2490
80°	8802	2540	2457
85°	6423	2552	2552

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 17762 cd/sqm



TEST NUMBER: P644205

CATALOG NUMBER: CRQ4DIP-SR4F0-100D150U940-FLLFLL-1DUDD-WW

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	137.1	1.4
10°-20°	389.1	4.1
20°-30°	574.7	6.0
30°-40°	661.5	6.9
40°-50°	642.2	6.7
50°-60°	542.9	5.7
60°-70°	413.8	4.3
70°-80°	302.1	3.2
80°-90°	241.7	2.5
90°-100°	278.3	2.9
100°-110°	442.6	4.6
110°-120°	651.1	6.8
120°-130°	841.9	8.8
130°-140°	952.2	10.0
140°-150°	940.8	9.9
150°-160°	795.8	8.4
160°-170°	529.8	5.6
170°-180°	185.3	1.9
0°-30°	1100.9	11.6
0°-40°	1762.4	18.5
0°-60°	2947.5	31.0
0°-90°	3905.1	41.0
90°-120°	1371.9	14.4
90°-150°	4106.9	43.1
90°-180°	5618.0	59.0
0°-180°	9522.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1452	1452	1452	1452	1452	
5°	1429	1455	1441	1444	1454	136
15°	1368	1392	1378	1382	1392	385
25°	1234	1258	1251	1245	1253	569
35°	1052	1074	1064	1048	1048	659
45°	843	857	839	812	800	650
55°	621	637	611	576	566	557
65°	410	424	412	411	411	408
75°	221	238	286	326	338	237
85°	68	130	246	310	329	72
90°	21	110	232	301	323	18
95°	114	155	274	340	354	114
105°	326	342	424	482	492	347
115°	586	610	661	700	710	582
125°	875	905	947	981	989	784
135°	1184	1211	1234	1266	1280	913
145°	1477	1496	1504	1515	1531	923
155°	1725	1735	1727	1729	1739	792
165°	1882	1891	1876	1870	1882	531
175°	1961	1970	1945	1936	1936	186
180°	1957	1957	1957	1957	1957	

TEST NUMBER: P644205

CATALOG NUMBER: CRQ4DIP-SR4F0-100D150U940-FLLFLL-1DUDD-WW

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1451.7	1451.7	1451.7	1451.7	1451.7
2.5°	1438.5	1459.4	1448.4	1450.1	1451.7
5°	1429.1	1455.2	1441.4	1443.7	1453.7
7.5°	1416.0	1441.7	1429.9	1430.6	1442.2
10°	1404.5	1428.6	1416.8	1419.1	1429.1
12.5°	1389.7	1415.4	1402.0	1406.0	1416.0
15°	1367.6	1391.7	1377.9	1382.2	1392.2
17.5°	1334.8	1358.5	1345.9	1347.3	1357.3
20°	1310.2	1332.3	1324.6	1322.7	1332.7
22.5°	1280.7	1304.3	1298.3	1291.6	1303.2
25°	1234.3	1258.4	1250.7	1244.8	1252.8
27.5°	1188.4	1210.5	1198.7	1190.2	1196.2
30°	1152.3	1174.4	1162.6	1152.4	1158.5
32.5°	1112.9	1136.7	1123.2	1111.4	1114.2
35°	1051.8	1074.0	1064.2	1047.7	1047.7
37.5°	994.0	1012.6	999.8	980.4	976.0
40°	951.4	971.5	955.5	932.8	926.8
42.5°	907.1	927.2	911.2	885.1	875.9
45°	842.7	856.8	838.6	811.7	799.6
47.5°	776.3	792.4	768.1	737.8	723.4
50°	732.0	748.1	723.9	688.6	672.5
52.5°	689.3	703.9	677.9	641.1	628.3
55°	621.3	637.4	611.1	576.0	566.1
57.5°	557.7	573.4	545.5	522.1	512.5
60°	516.7	530.8	504.5	486.1	478.2
62.5°	470.8	486.5	463.5	455.1	450.4
65°	410.1	424.3	412.4	410.7	410.8
67.5°	353.1	365.3	364.5	377.4	382.0
70°	313.7	325.9	336.7	357.9	364.1
72.5°	277.6	289.8	315.6	343.3	351.1
75°	221.4	237.7	285.8	325.6	337.9
77.5°	172.2	191.0	265.1	314.5	329.2
80°	139.4	167.9	255.5	309.8	326.1
82.5°	109.9	148.1	249.1	310.1	326.3
85°	67.7	130.5	245.7	310.5	328.7
87.5°	33.7	117.9	239.8	307.1	327.8
90°	20.7	109.6	231.7	300.6	323.0
92.5°	55.5	121.9	245.2	312.3	329.8
95°	114.0	154.7	273.7	340.3	354.5
97.5°	172.1	199.1	310.0	372.1	385.9
100°	213.7	234.2	338.3	398.7	410.9
102.5°	258.6	274.2	371.7	428.8	442.6
105°	325.9	342.4	423.7	482.0	492.1
107.5°	400.8	418.4	487.4	542.4	552.9
110°	450.7	473.1	533.9	584.0	596.2

TEST NUMBER: P644205

CATALOG NUMBER: CRQ4DIP-SR4F0-100D150U940-FLLFLL-1DUDD-WW

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	505.5	528.0	582.1	628.9	641.1
115°	585.7	610.2	660.7	700.4	710.5
117.5°	669.7	695.8	741.7	779.0	788.7
120°	731.2	755.7	799.9	835.5	843.6
122.5°	786.1	813.8	858.1	893.6	901.8
125°	874.6	905.2	947.4	980.9	989.0
127.5°	965.7	995.4	1034.3	1068.2	1078.8
130°	1030.5	1056.9	1090.8	1126.4	1138.6
132.5°	1090.4	1116.8	1147.3	1183.0	1196.8
135°	1184.3	1210.7	1234.2	1265.7	1279.9
137.5°	1274.5	1300.1	1318.1	1343.1	1360.9
140°	1336.0	1358.4	1371.3	1394.6	1410.8
142.5°	1392.5	1414.9	1424.5	1444.4	1460.7
145°	1477.3	1495.6	1504.3	1515.1	1531.3
147.5°	1556.7	1574.5	1578.3	1587.7	1597.8
150°	1608.2	1624.5	1624.8	1629.2	1639.4
152.5°	1656.4	1671.0	1666.4	1669.1	1680.9
155°	1724.6	1734.7	1726.6	1728.9	1739.1
157.5°	1778.6	1788.7	1776.1	1780.0	1788.1
160°	1811.8	1822.0	1807.7	1809.9	1818.1
162.5°	1843.4	1850.3	1837.6	1834.9	1846.3
165°	1882.5	1890.6	1876.2	1870.3	1882.5
167.5°	1915.7	1923.8	1904.9	1898.5	1910.7
170°	1932.3	1940.5	1919.9	1911.8	1924.0
172.5°	1947.3	1955.4	1933.2	1923.4	1932.3
175°	1961.4	1969.5	1944.8	1936.5	1936.5
177.5°	1965.6	1970.5	1952.3	1944.2	1953.9
180°	1957.3	1957.3	1957.3	1957.3	1957.3

(END OF REPORT)