

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: P644243

Luminaire Tested: CRQ4DIP-SR4F0-125D100U830-FLLFLL-1DUDD-WW

Issue Date: 2/20/2023



Test Information

Test Method: LM-79-2019
Report Number: P644243
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-SR4F0-125D100U830-FLLFLL-1DUDD-WW
Description: NEO-RAY CIRQUE SUSPENDED LED LUMINAIRE
DOWNLIGHT - CURVED FROSTED LENS - 1250 LUMENS PER FOOT
UPLIGHT - CURVED FROSTED LENS - 1000 LUMENS PER FOOT
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

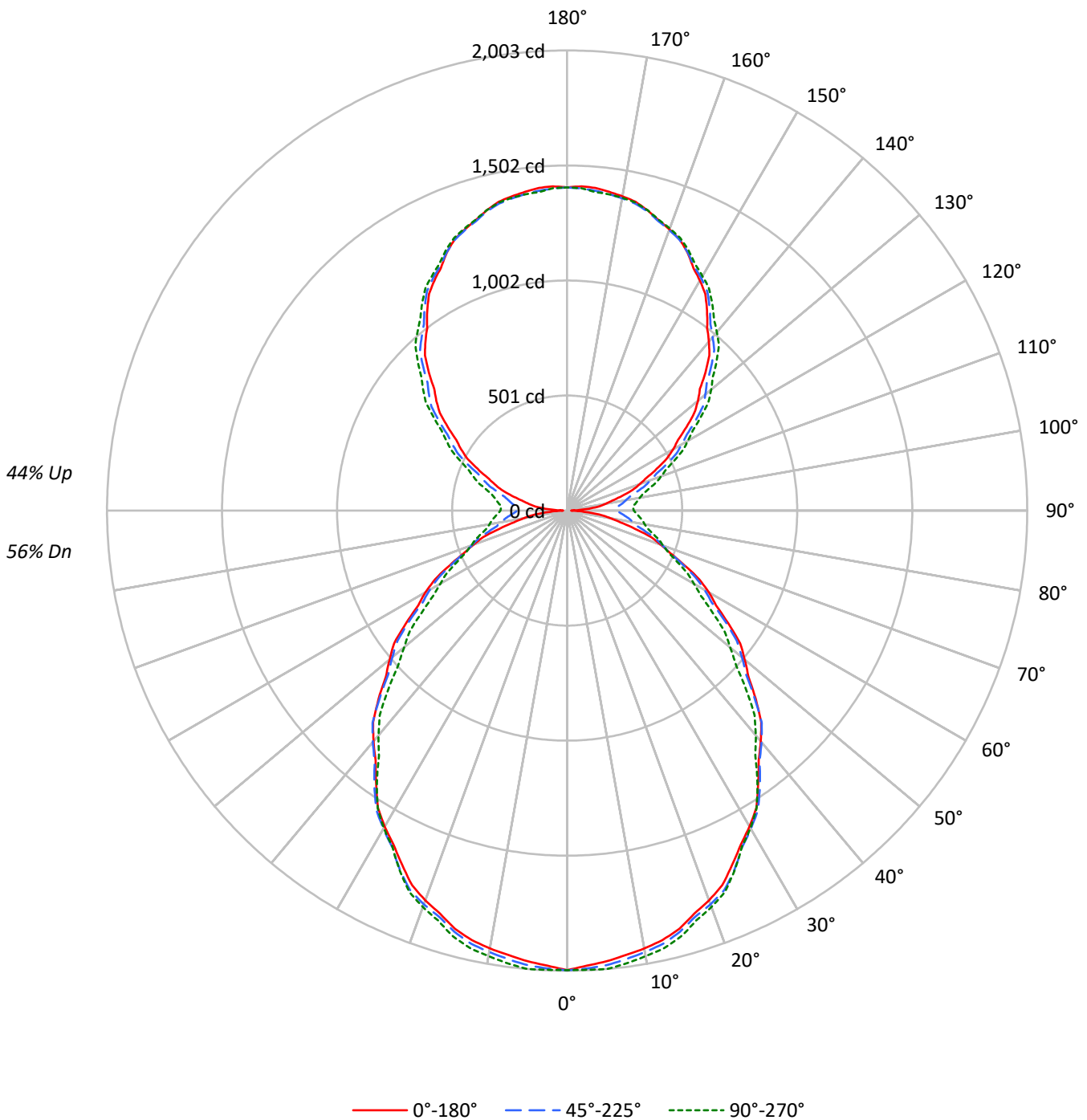
Lumens per Lamp: N/A
Luminaire Lumens: 9311.9 lumens
Efficiency: N/A
Efficacy: 135.0 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.19 / 1.3
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.33')
CIE Type: General Diffuse

Input Watts (W): 69
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	0
RCR																		
0	109	109	109	109	101	101	101	101	87	87	87	74	74	74	62	62	62	56
1	99	94	90	86	91	87	84	80	75	72	70	64	62	60	54	52	51	46
2	90	82	75	70	83	76	71	66	66	62	58	56	53	50	47	45	43	38
3	82	72	64	58	76	67	60	55	58	53	49	50	46	42	42	39	36	33
4	75	64	56	50	69	60	52	47	52	46	42	44	40	36	37	34	31	28
5	69	57	49	43	64	53	46	40	46	40	36	40	35	32	34	30	27	24
6	63	51	43	37	59	48	41	35	42	36	31	36	31	28	31	27	24	21
7	59	46	38	32	54	43	36	31	38	32	28	33	28	25	28	24	22	19
8	55	42	34	29	51	40	32	27	35	29	25	30	25	22	26	22	19	17
9	51	38	31	26	47	36	29	25	32	26	22	28	23	20	24	20	18	15
10	48	35	28	23	44	33	27	22	29	24	20	26	21	18	22	19	16	14

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	32300	32300	32300
5°	31688	28519	27633
10°	31273	25392	23870
15°	30815	22741	20880
20°	30109	20401	18263
25°	29170	18202	15914
30°	28247	16114	13813
35°	26995	14190	11856
40°	25828	12399	10051
45°	24477	10657	8388
50°	23048	9055	6880
55°	21536	7613	5624
60°	20092	6272	4608
65°	18316	5094	3812
70°	16606	4122	3229
75°	14523	3400	2836
80°	12129	2886	2580
85°	8843	2607	2453

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 24477 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	188.9	2.0
10°-20°	536.0	5.8
20°-30°	791.5	8.5
30°-40°	910.6	9.8
40°-50°	883.6	9.5
50°-60°	743.5	8.0
60°-70°	551.9	5.9
70°-80°	372.7	4.0
80°-90°	249.3	2.7
90°-100°	229.9	2.5
100°-110°	328.9	3.5
110°-120°	471.7	5.1
120°-130°	606.6	6.5
130°-140°	684.6	7.4
140°-150°	676.2	7.3
150°-160°	571.9	6.1
160°-170°	380.8	4.1
170°-180°	133.2	1.4
0°-30°	1516.4	16.3
0°-40°	2427.0	26.1
0°-60°	4054.1	43.5
0°-90°	5228.0	56.1
90°-120°	1030.6	11.1
90°-150°	2998.0	32.2
90°-180°	4084.0	43.9
0°-180°	9311.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2000	2000	2000	2000	2000	
5°	1969	2005	1986	1990	2003	187
15°	1885	1915	1898	1905	1919	530
25°	1701	1732	1724	1715	1726	784
35°	1450	1476	1462	1444	1444	908
45°	1161	1177	1154	1119	1102	895
55°	856	873	839	790	770	768
65°	565	577	555	534	528	562
75°	305	317	354	379	385	326
85°	93	148	251	303	316	99
90°	19	105	215	273	290	18
95°	96	123	225	282	294	94
105°	248	252	311	359	369	264
115°	430	443	478	506	513	427
125°	634	653	682	705	711	568
135°	851	870	887	910	920	656
145°	1062	1075	1081	1089	1101	663
155°	1239	1247	1241	1243	1250	569
165°	1353	1359	1348	1344	1353	381
175°	1410	1416	1398	1392	1392	134
180°	1407	1407	1407	1407	1407	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2000.5	2000.5	2000.5	2000.5	2000.5
2.5°	1982.4	2011.2	1994.9	1998.3	2000.5
5°	1969.4	2005.3	1986.4	1989.5	2003.3
7.5°	1951.3	1985.7	1969.2	1971.5	1987.5
10°	1935.5	1968.7	1951.1	1955.6	1969.4
12.5°	1915.2	1948.5	1931.9	1937.5	1951.3
15°	1884.7	1915.2	1897.5	1904.8	1918.6
17.5°	1839.4	1870.7	1853.4	1856.7	1870.5
20°	1805.5	1834.6	1824.0	1822.8	1836.6
22.5°	1764.9	1796.2	1787.8	1779.9	1795.9
25°	1701.0	1731.5	1723.6	1715.4	1726.4
27.5°	1637.7	1663.4	1650.2	1640.2	1648.4
30°	1588.0	1615.8	1599.4	1588.2	1596.4
32.5°	1533.7	1562.7	1545.2	1531.5	1535.4
35°	1449.5	1476.0	1462.5	1443.9	1443.9
37.5°	1369.8	1390.0	1376.4	1351.1	1345.0
40°	1311.1	1333.5	1315.4	1285.4	1277.2
42.5°	1250.0	1272.5	1253.3	1219.8	1207.1
45°	1161.3	1176.7	1154.3	1118.6	1102.0
47.5°	1069.8	1086.9	1056.6	1016.8	996.9
50°	1008.7	1026.9	993.4	948.9	926.8
52.5°	950.0	964.9	931.2	882.3	863.6
55°	856.1	873.0	839.4	789.6	770.5
57.5°	768.6	784.9	747.3	707.0	690.9
60°	712.0	726.2	689.8	652.0	637.0
62.5°	648.8	664.0	631.1	603.8	591.2
65°	565.1	576.6	554.6	534.3	527.8
67.5°	486.6	495.3	483.4	478.5	476.5
70°	432.3	441.1	440.7	445.0	444.2
72.5°	382.6	390.3	403.9	416.2	417.6
75°	305.2	316.8	354.1	378.6	384.8
77.5°	237.3	248.7	313.6	348.5	357.7
80°	192.1	212.6	290.4	332.1	342.5
82.5°	151.5	181.0	272.9	320.4	330.8
85°	93.2	147.6	251.0	302.9	316.0
87.5°	44.5	121.1	230.8	286.1	301.3
90°	18.9	105.3	215.2	272.9	290.2
92.5°	48.3	107.9	216.2	272.7	287.6
95°	95.5	123.4	225.1	282.5	294.0
97.5°	139.9	151.1	243.3	295.8	307.3
100°	169.8	175.3	259.4	309.6	321.0
102.5°	201.0	203.0	279.0	326.9	338.4
105°	247.8	251.6	311.3	358.7	368.6
107.5°	299.9	304.9	354.1	397.4	406.3
110°	334.7	344.3	386.4	425.2	435.2



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	374.1	383.7	421.1	455.3	465.4
115°	430.4	442.7	477.5	506.1	513.4
117.5°	489.2	504.2	535.5	560.9	567.9
120°	532.3	547.2	576.3	600.4	606.3
122.5°	571.7	587.9	618.1	642.3	648.1
125°	634.0	653.3	682.3	705.0	710.8
127.5°	697.8	718.1	744.7	767.7	775.3
130°	743.3	762.3	785.3	809.6	818.3
132.5°	784.2	803.2	824.9	850.2	860.1
135°	851.2	870.2	887.0	909.7	919.9
137.5°	916.0	934.4	947.4	965.3	978.1
140°	960.2	976.3	985.6	1002.3	1014.0
142.5°	1000.8	1016.9	1023.8	1038.1	1049.8
145°	1061.7	1074.9	1081.1	1088.9	1100.6
147.5°	1118.8	1131.6	1134.3	1141.0	1148.3
150°	1155.8	1167.5	1167.8	1170.9	1178.2
152.5°	1190.5	1201.0	1197.6	1199.6	1208.1
155°	1239.4	1246.7	1240.9	1242.6	1249.9
157.5°	1278.3	1285.6	1276.5	1279.3	1285.1
160°	1302.2	1309.5	1299.2	1300.8	1306.6
162.5°	1324.9	1329.8	1320.7	1318.8	1326.9
165°	1352.9	1358.8	1348.5	1344.2	1352.9
167.5°	1376.8	1382.7	1369.1	1364.5	1373.2
170°	1388.8	1394.6	1379.8	1374.0	1382.8
172.5°	1399.5	1405.4	1389.4	1382.3	1388.8
175°	1409.7	1415.5	1397.7	1391.8	1391.8
177.5°	1412.7	1416.2	1403.1	1397.3	1404.3
180°	1406.7	1406.7	1406.7	1406.7	1406.7

(END OF REPORT)