

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: P644339

Luminaire Tested: CRQ4DIP-SR4F0-50D150U830-FLLFLL-1DUDD-WW

Issue Date: 2/20/2023



Test Information

Test Method: LM-79-2019
Report Number: P644339
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-SR4F0-50D150U830-FLLFLL-1DUDD-WW
Description: NEO-RAY CIRQUE SUSPENDED LED LUMINAIRE
DOWNLIGHT - CURVED FROSTED LENS - 500 LUMENS PER FOOT
UPLIGHT - CURVED FROSTED LENS - 1500 LUMENS PER FOOT
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

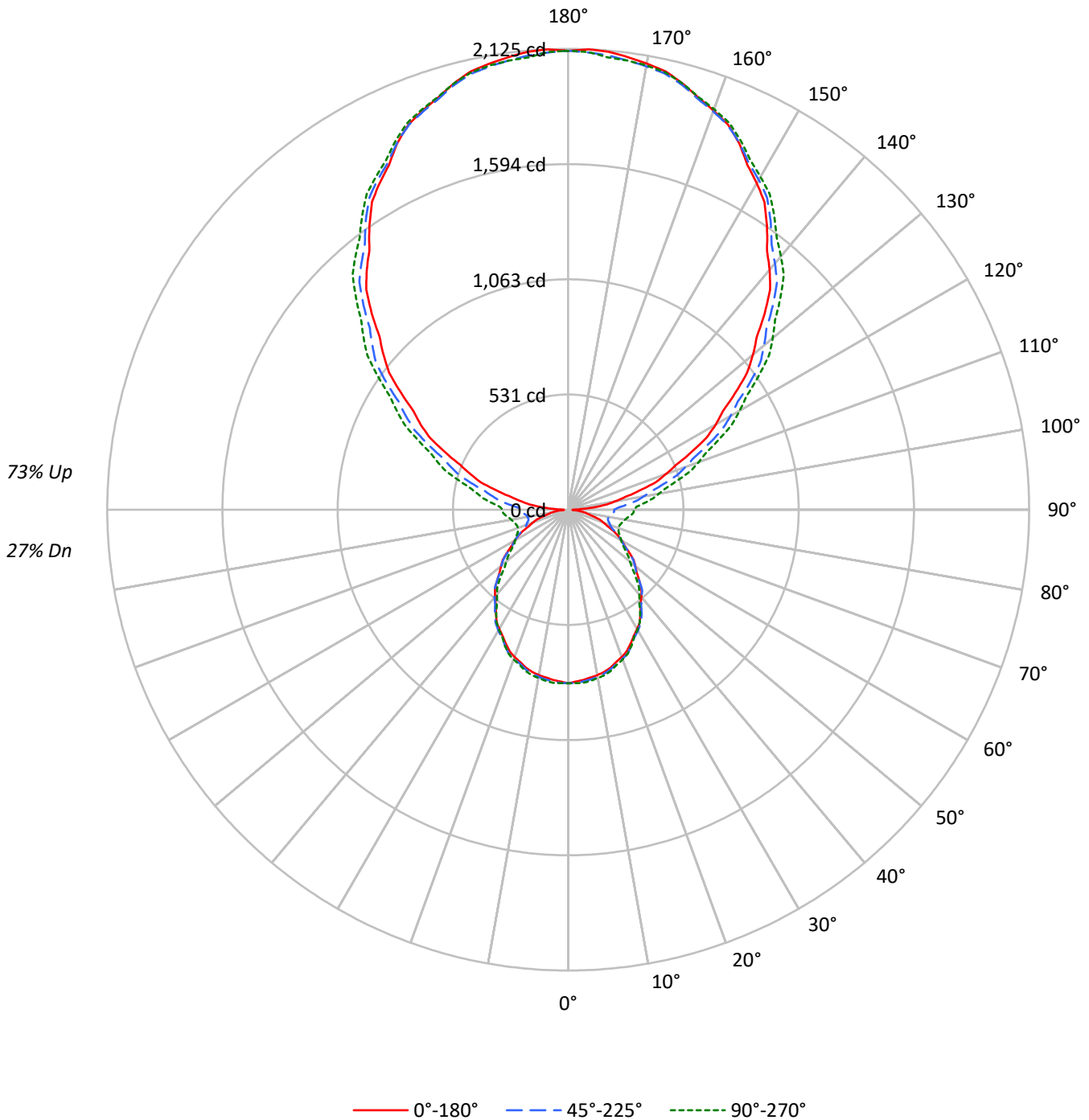
Lumens per Lamp: N/A
Luminaire Lumens: 8312.9 lumens
Efficiency: N/A
Efficacy: 132.2 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.19 / 1.3
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.33')
CIE Type: Semi-Indirect

Input Watts (W): 62.9
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

TEST NUMBER: P644339

CATALOG NUMBER: CRQ4DIP-SR4F0-50D150U830-FLLFLL-1DUDD-WW

Luminous Intensity Polar Plot





TEST NUMBER: P644339

CATALOG NUMBER: CRQ4DIP-SR4F0-50D150U830-FLLFLL-1DUDD-WW

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	102	102	102	102	91	91	91	91	71	71	71	52	52	52	35	35	35	27
1	92	87	83	80	82	78	75	72	61	58	56	45	43	42	30	29	28	21
2	83	76	70	65	74	68	63	58	53	49	46	39	37	34	26	25	23	18
3	76	67	59	54	68	60	54	49	47	42	39	34	31	29	23	21	20	15
4	69	59	51	45	62	53	46	41	41	36	33	31	27	25	21	19	17	13
5	64	52	44	38	57	47	40	35	37	32	28	27	24	21	19	16	15	11
6	59	47	39	33	52	42	35	30	33	28	24	25	21	19	17	15	13	10
7	54	42	34	29	48	38	31	26	30	25	21	22	19	16	15	13	12	9
8	50	38	31	25	45	34	28	23	27	22	19	20	17	15	14	12	10	8
9	46	35	27	22	41	31	25	21	25	20	17	19	15	13	13	11	9	7
10	43	32	25	20	39	29	22	18	23	18	15	17	14	12	12	10	8	6

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	12925	12925	12925
5°	12681	11411	11057
10°	12514	10182	9552
15°	12330	9119	8355
20°	12049	8182	7308
25°	11671	7284	6368
30°	11302	6481	5527
35°	10802	5725	4744
40°	10334	4977	4021
45°	9795	4279	3356
50°	9222	3669	2753
55°	8618	3076	2335
60°	8039	2569	2035
65°	7328	2190	1859
70°	6645	1912	1795
75°	5810	1819	1851
80°	4855	1892	2002
85°	3539	2138	2262

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 9795 cd/sqm



TEST NUMBER: P644339

CATALOG NUMBER: CRQ4DIP-SR4F0-50D150U830-FLLFLL-1DUDD-WW

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	75.6	0.9
10°-20°	214.7	2.6
20°-30°	317.3	3.8
30°-40°	365.7	4.4
40°-50°	355.2	4.3
50°-60°	303.1	3.6
60°-70°	242.8	2.9
70°-80°	201.7	2.4
80°-90°	200.6	2.4
90°-100°	276.9	3.3
100°-110°	469.7	5.7
110°-120°	700.8	8.4
120°-130°	908.9	10.9
130°-140°	1029.3	12.4
140°-150°	1017.1	12.2
150°-160°	860.3	10.3
160°-170°	572.8	6.9
170°-180°	200.3	2.4
0°-30°	607.6	7.3
0°-40°	973.3	11.7
0°-60°	1631.5	19.6
0°-90°	2276.7	27.4
90°-120°	1447.4	17.4
90°-150°	4402.8	53.0
90°-180°	6036.0	72.6
0°-180°	8312.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	800	800	800	800	800	
5°	788	802	795	796	802	75
15°	754	770	761	762	768	212
25°	681	696	690	686	691	314
35°	580	596	590	578	578	363
45°	465	476	464	448	441	358
55°	343	356	339	321	320	307
65°	226	240	238	252	257	225
75°	122	140	190	236	251	131
85°	37	98	206	272	291	40
90°	19	97	211	279	302	15
95°	112	157	273	338	352	115
105°	342	366	453	511	520	364
115°	626	656	712	755	766	622
125°	941	976	1023	1060	1069	844
135°	1280	1309	1334	1368	1384	986
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	

TEST NUMBER: P644339

CATALOG NUMBER: CRQ4DIP-SR4F0-50D150U830-FLLFLL-1DUDD-WW

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	800.5	800.5	800.5	800.5	800.5
2.5°	793.3	804.8	799.6	799.6	800.5
5°	788.1	802.4	794.8	796.1	801.6
7.5°	780.8	795.8	789.6	788.9	795.3
10°	774.5	787.8	782.4	782.5	788.1
12.5°	766.3	782.2	773.4	775.3	780.8
15°	754.1	769.6	760.9	762.2	767.7
17.5°	736.0	750.2	743.3	743.0	748.5
20°	722.5	735.7	731.5	729.4	734.9
22.5°	706.2	720.3	717.0	712.2	718.6
25°	680.6	696.1	689.7	686.4	690.8
27.5°	655.3	671.4	662.3	656.3	659.6
30°	635.4	649.8	643.3	635.5	638.8
32.5°	613.7	629.8	621.6	612.8	614.4
35°	580.0	595.5	590.1	577.8	577.8
37.5°	548.1	562.7	552.4	540.6	538.2
40°	524.6	540.0	528.0	514.4	511.0
42.5°	500.2	515.6	504.5	488.1	483.0
45°	464.7	475.7	463.5	447.6	440.9
47.5°	428.1	441.0	425.1	406.8	398.9
50°	403.6	415.8	402.5	379.7	370.9
52.5°	380.1	392.2	376.2	354.4	348.2
55°	342.6	355.8	339.2	321.0	319.9
57.5°	307.5	320.5	304.3	297.8	294.9
60°	284.9	297.0	282.6	282.4	281.3
62.5°	259.6	273.5	261.8	269.8	272.2
65°	226.1	240.4	238.4	251.9	257.4
67.5°	194.7	207.9	216.2	241.5	250.7
70°	173.0	186.2	204.4	236.0	247.0
72.5°	153.1	167.1	198.9	235.0	246.9
75°	122.1	139.7	189.5	235.9	251.2
77.5°	95.0	116.9	187.8	241.6	258.5
80°	76.9	107.6	190.4	247.0	265.7
82.5°	60.6	100.1	193.9	256.8	275.5
85°	37.3	97.8	205.9	271.6	291.3
87.5°	20.1	98.2	212.4	279.4	301.6
90°	19.1	97.2	211.4	279.4	302.4
92.5°	53.3	115.5	232.9	299.0	315.9
95°	112.4	157.4	273.1	337.5	351.8
97.5°	173.1	208.8	318.6	379.4	393.0
100°	218.0	247.6	352.7	412.6	423.6
102.5°	267.4	291.7	392.3	448.5	462.2
105°	341.5	365.6	452.7	511.3	520.1
107.5°	423.7	448.9	523.8	580.3	590.6
110°	478.5	508.1	575.1	627.0	639.1



TEST NUMBER: P644339

CATALOG NUMBER: CRQ4DIP-SR4F0-50D150U830-FLLFLL-1DUDD-WW

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	537.8	567.4	627.2	677.3	689.4
115°	625.6	656.3	712.1	755.0	766.0
117.5°	717.7	748.9	799.9	841.2	851.8
120°	785.1	813.6	863.7	903.2	912.0
122.5°	844.4	877.3	926.6	966.1	974.9
125°	941.2	976.3	1023.2	1060.4	1069.2
127.5°	1040.9	1073.9	1117.1	1154.8	1166.2
130°	1111.9	1140.5	1178.2	1217.8	1230.9
132.5°	1178.4	1206.9	1240.1	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)