

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: P644294

Luminaire Tested: CRQ4DIP-SR4F0-125D50U835-FLLOOB-1DUDD-WW

Issue Date: 2/20/2023



**Test Information**

Test Method: LM-79-2019  
Report Number: P644294  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2203-563-26, G2-2206-689-14)  
Test Lab: INNOVATION CENTER  
Issue Date: 2/20/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: CRQ4DIP-SR4F0-125D50U835-FLLOOB-1DUDD-WW  
Description: NEO-RAY CIRQUE SUSPENDED LED LUMINAIRE  
DOWNLIGHT - CURVED FROSTED LENS - 1250 LUMENS PER FOOT  
UPLIGHT - BATWING OPTIC - 500 LUMENS PER FOOT  
Light Source: 3500K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

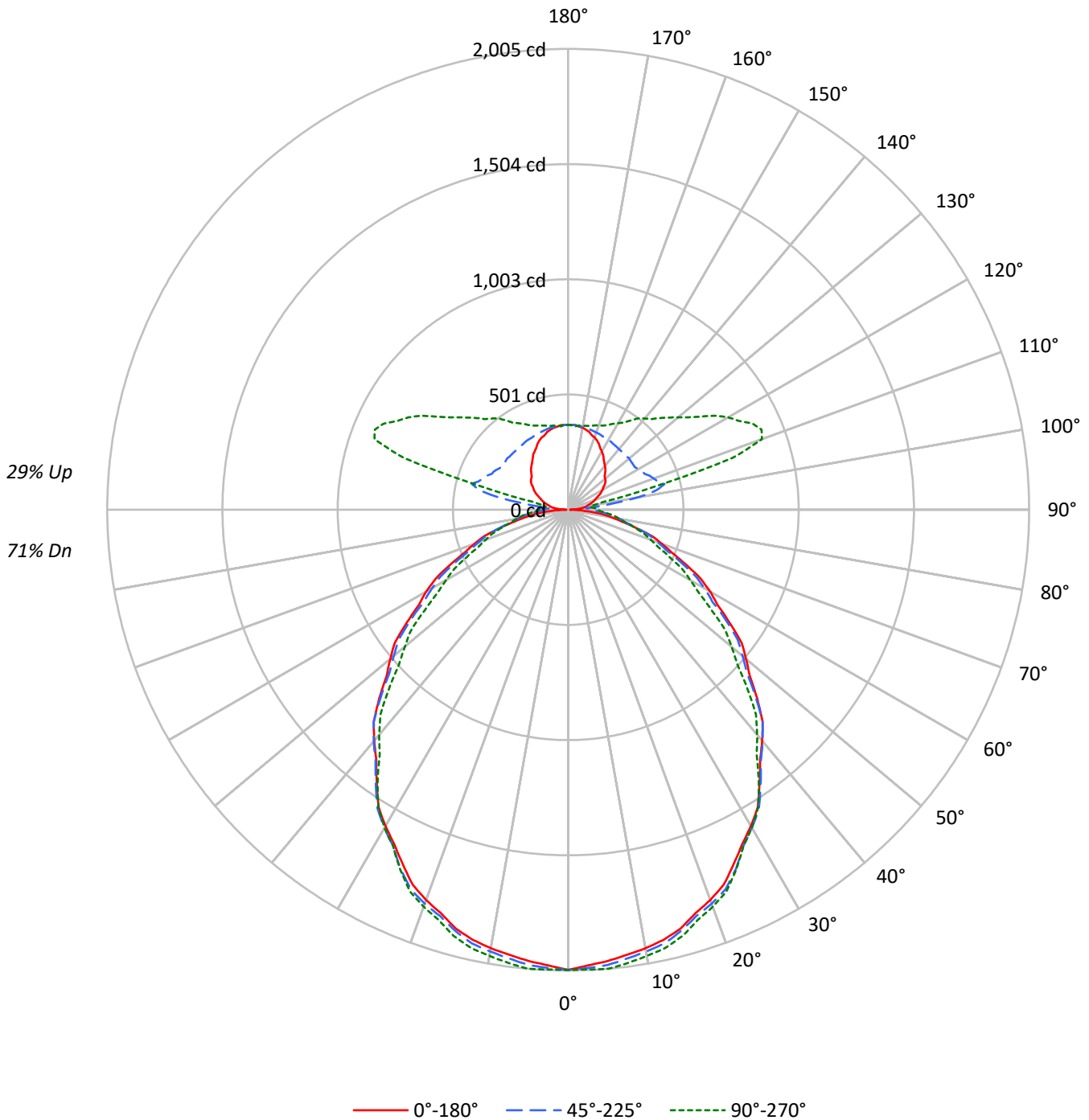
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 7146.1 lumens  
Efficiency: N/A  
Efficacy: 130.9 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-Direct  
  
Input Watts (W): 54.6  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): 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: P644294

CATALOG NUMBER: CRQ4DIP-SR4F0-125D50U835-FLLOOB-1DUDD-WW

### Luminous Intensity Polar Plot





TEST NUMBER: P644294

CATALOG NUMBER: CRQ4DIP-SR4F0-125D50U835-FLLOOB-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	112	112	112	112	106	106	106	106	95	95	95	85	85	85	75	75	75	75	75	75	75	75	75	71														
1	102	98	93	90	97	93	89	86	83	80	78	74	72	70	66	65	63	63	63	63	63	63	63	59														
2	93	85	79	74	88	81	75	70	73	68	64	65	62	59	58	56	53	53	53	53	53	53	53	50														
3	85	75	68	61	80	71	65	59	64	59	54	58	54	50	52	48	46	46	46	46	46	46	46	42														
4	78	67	59	52	74	64	56	50	57	51	47	52	47	43	46	43	39	39	39	39	39	39	39	36														
5	72	60	51	45	68	57	49	44	52	45	40	47	41	37	42	38	34	34	34	34	34	34	34	32														
6	66	54	45	39	63	51	44	38	47	40	35	42	37	33	38	34	30	30	30	30	30	30	30	28														
7	61	49	40	35	58	47	39	34	42	36	31	39	33	29	35	31	27	27	27	27	27	27	27	25														
8	57	44	36	31	54	42	35	30	39	33	28	35	30	26	32	28	24	24	24	24	24	24	24	22														
9	53	41	33	28	50	39	32	27	36	30	25	33	27	24	30	25	22	22	22	22	22	22	22	20														
10	50	37	30	25	47	36	29	24	33	27	23	30	25	22	28	23	20	20	20	20	20	20	20	18														

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	32329	32329	32329
5°	31717	28545	27658
10°	31302	25396	23892
15°	30843	22743	20899
20°	30137	20402	18279
25°	29195	18219	15929
30°	28272	16099	13826
35°	27019	14159	11867
40°	25850	12396	10060
45°	24500	10654	8395
50°	23069	9022	6886
55°	21556	7592	5554
60°	20111	6223	4439
65°	18332	4962	3513
70°	16621	3888	2775
75°	14532	2987	2189
80°	12142	2220	1704
85°	8852	1615	1296

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 24500 cd/sqm



TEST NUMBER: P644294

CATALOG NUMBER: CRQ4DIP-SR4F0-125D50U835-FLLOOB-1DUDD-WW

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	189.0	2.6
10°-20°	536.3	7.5
20°-30°	791.7	11.1
30°-40°	910.2	12.7
40°-50°	882.9	12.4
50°-60°	739.1	10.3
60°-70°	532.5	7.5
70°-80°	325.4	4.6
80°-90°	158.9	2.2
90°-100°	108.0	1.5
100°-110°	346.1	4.8
110°-120°	447.0	6.3
120°-130°	360.7	5.0
130°-140°	287.9	4.0
140°-150°	226.6	3.2
150°-160°	165.7	2.3
160°-170°	102.9	1.4
170°-180°	35.1	0.5
0°-30°	1517.0	21.2
0°-40°	2427.2	34.0
0°-60°	4049.3	56.7
0°-90°	5066.1	70.9
90°-120°	901.1	12.6
90°-150°	1776.3	24.9
90°-180°	2080.0	29.1
0°-180°	7146.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2002	2002	2002	2002	2002	
5°	1971	2007	1988	1991	2005	187
15°	1886	1914	1898	1906	1920	531
25°	1702	1730	1725	1717	1728	784
35°	1451	1473	1459	1445	1445	908
45°	1162	1173	1154	1120	1103	896
55°	857	868	837	786	761	768
65°	566	568	540	500	486	563
75°	305	305	311	302	297	327
85°	93	113	156	167	167	99
90°	8	58	106	126	129	11
95°	47	60	78	100	108	45
105°	100	122	434	562	386	106
115°	148	164	368	758	886	146
125°	195	214	344	597	706	173
135°	228	252	344	492	564	176
145°	269	292	346	428	474	169
155°	316	327	353	388	406	145
165°	351	355	362	372	378	98
175°	369	372	369	367	365	35
180°	369	369	369	369	369	

TEST NUMBER: P644294

CATALOG NUMBER: CRQ4DIP-SR4F0-125D50U835-FLLOOB-1DUDD-WW

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2002.3	2002.3	2002.3	2002.3	2002.3
2.5°	1984.2	2013.0	1995.5	2000.1	2002.3
5°	1971.2	2007.2	1988.2	1991.3	2005.1
7.5°	1953.1	1986.3	1969.5	1973.3	1989.3
10°	1937.3	1970.4	1951.4	1957.4	1971.2
12.5°	1916.9	1947.9	1933.3	1939.3	1953.1
15°	1886.4	1914.0	1897.7	1906.5	1920.3
17.5°	1841.1	1871.0	1853.6	1858.4	1872.2
20°	1807.2	1834.8	1824.1	1824.5	1838.3
22.5°	1766.4	1796.3	1787.9	1781.5	1797.6
25°	1702.5	1730.2	1725.2	1716.9	1728.0
27.5°	1639.2	1659.6	1649.9	1641.6	1649.9
30°	1589.4	1614.3	1597.9	1589.6	1597.9
32.5°	1535.1	1560.0	1543.6	1532.9	1536.8
35°	1450.8	1472.9	1459.3	1445.2	1445.2
37.5°	1371.1	1385.5	1376.2	1352.3	1346.2
40°	1312.2	1328.8	1315.1	1286.6	1278.3
42.5°	1251.2	1267.8	1251.7	1220.9	1208.2
45°	1162.4	1173.4	1153.9	1119.6	1103.0
47.5°	1070.7	1082.3	1055.5	1017.7	997.8
50°	1009.6	1023.5	989.8	949.7	927.6
52.5°	950.8	960.2	928.8	881.9	862.0
55°	856.9	868.0	837.1	785.7	760.8
57.5°	769.2	779.8	743.2	694.1	674.8
60°	712.7	721.0	684.4	633.1	613.7
62.5°	649.3	657.6	623.3	578.8	559.4
65°	565.6	568.4	540.2	500.3	486.4
67.5°	487.0	487.0	463.2	433.6	422.5
70°	432.7	432.7	415.7	392.9	381.8
72.5°	382.9	380.7	370.5	354.4	345.6
75°	305.4	305.4	311.1	302.5	297.0
77.5°	237.6	233.1	257.4	256.2	253.4
80°	192.3	192.3	223.4	229.0	226.2
82.5°	151.6	156.0	196.3	204.1	201.4
85°	93.3	112.7	155.5	166.9	166.9
87.5°	42.4	76.6	123.1	138.3	138.8
90°	8.5	57.8	106.5	125.8	128.6
92.5°	23.1	50.3	93.9	115.2	122.0
95°	46.9	60.0	78.0	100.3	107.6
97.5°	66.9	82.9	179.5	99.7	97.6
100°	78.1	97.3	307.9	128.9	107.1
102.5°	86.9	108.0	395.5	251.9	159.0
105°	100.3	122.3	434.4	562.5	386.4
107.5°	113.6	126.6	409.2	797.3	750.6
110°	122.5	135.9	395.7	832.4	896.5



TEST NUMBER: P644294

CATALOG NUMBER: CRQ4DIP-SR4F0-125D50U835-FLLOOB-1DUDD-WW

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	133.6	147.0	384.6	804.7	910.5
115°	147.5	163.7	367.9	758.5	885.7
117.5°	161.3	180.3	363.1	706.5	837.2
120°	172.0	191.5	353.4	667.2	803.4
122.5°	181.3	200.4	344.2	635.4	760.7
125°	194.7	214.2	344.2	596.9	705.9
127.5°	204.8	228.0	344.6	552.3	659.9
130°	210.0	237.2	346.5	522.4	624.6
132.5°	214.8	242.0	344.2	509.0	593.0
135°	227.6	252.5	343.7	491.6	564.2
137.5°	239.2	266.0	343.7	472.3	534.5
140°	248.5	273.4	343.7	461.0	517.8
142.5°	257.7	280.9	345.5	448.0	501.1
145°	269.4	292.1	346.0	428.3	473.7
147.5°	283.3	303.3	348.8	414.1	449.1
150°	292.6	310.7	350.6	404.7	434.2
152.5°	301.9	318.2	350.6	397.1	421.2
155°	315.8	327.1	352.9	388.2	406.3
157.5°	326.9	337.8	355.7	382.5	395.7
160°	334.4	343.4	357.6	378.7	390.1
162.5°	339.9	349.0	359.4	376.8	384.5
165°	350.6	355.2	362.2	371.7	378.5
167.5°	356.7	360.7	364.6	369.3	373.4
170°	362.2	364.5	364.6	369.2	371.5
172.5°	364.1	368.2	366.4	367.4	369.7
175°	369.2	371.5	369.2	366.8	364.6
177.5°	369.2	371.0	369.2	369.2	367.3
180°	369.2	369.2	369.2	369.2	369.2

(END OF REPORT)