

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: P644394

Luminaire Tested: CRQ4DIP-SR4F0-75D100U930-FLLOOB-1DUDD-WW

Issue Date: 2/20/2023



**Test Information**

Test Method: LM-79-2019  
Report Number: P644394  
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-SR4F0-75D100U930-FLLOOB-1DUDD-WW  
Description: NEO-RAY CIRQUE SUSPENDED LED LUMINAIRE  
DOWNLIGHT - CURVED FROSTED LENS - 750 LUMENS PER FOOT  
UPLIGHT - BATWING OPTIC - 1000 LUMENS PER FOOT  
Light Source: 3000K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

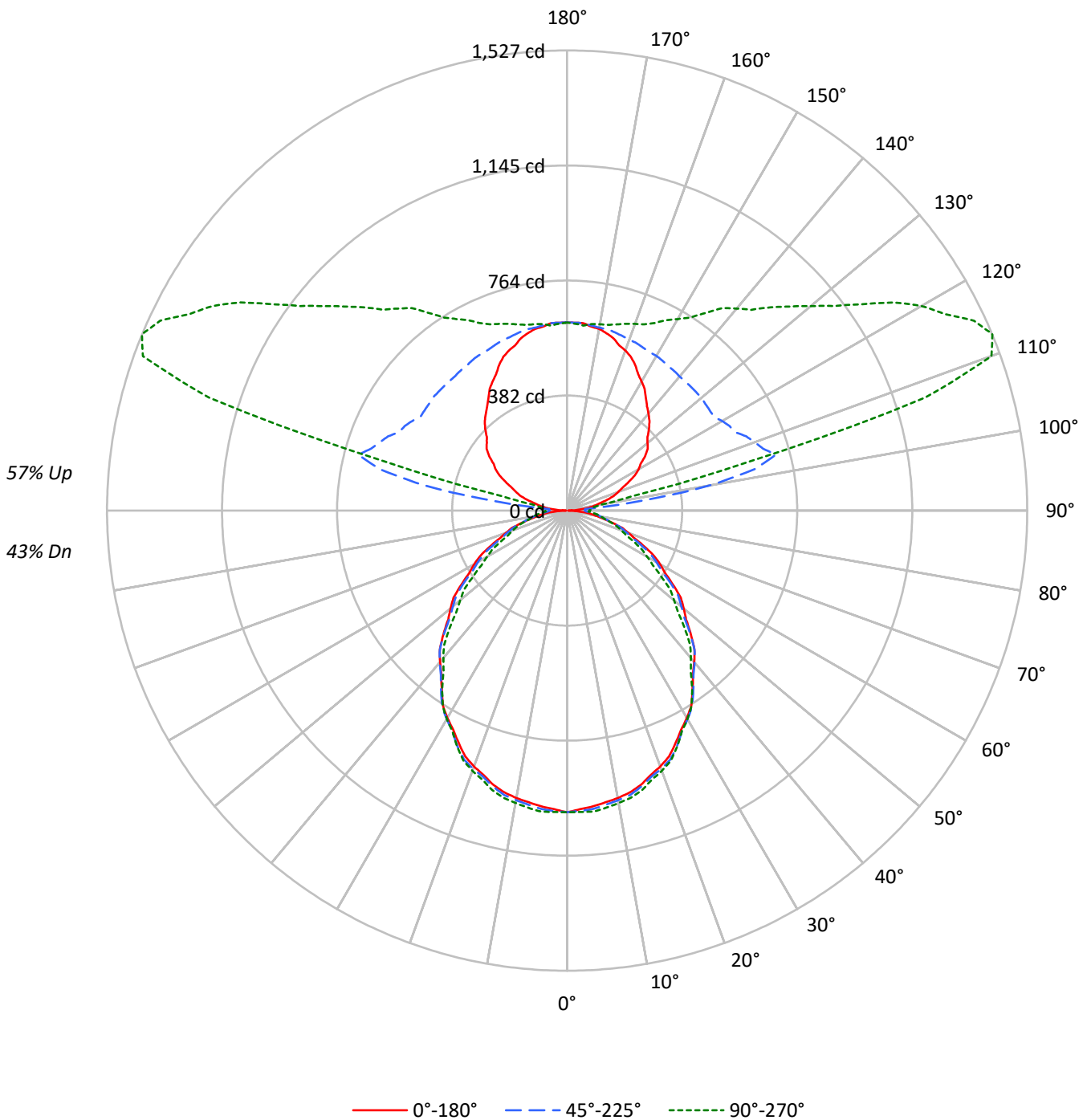
Lumens per Lamp: N/A  
Luminaire Lumens: 5933.9 lumens  
Efficiency: N/A  
Efficacy: 116.8 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.19 / 1.3  
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.33')  
CIE Type: General Diffuse

Input Watts (W): 50.8  
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: P644394

CATALOG NUMBER: CRQ4DIP-SR4F0-75D100U930-FLLOOB-1DUDD-WW

### Luminous Intensity Polar Plot





TEST NUMBER: P644394

CATALOG NUMBER: CRQ4DIP-SR4F0-75D100U930-FLLOOB-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	105	105	105	105	96	96	96	96	79	79	79	64	64	64	49	49	49	43
1	96	92	88	84	88	84	80	77	69	67	65	56	54	53	43	42	41	36
2	87	80	74	69	80	73	68	64	61	57	54	49	46	44	38	36	35	30
3	80	70	63	57	73	65	58	53	54	49	45	43	40	37	34	32	30	25
4	73	62	55	49	66	57	50	45	48	43	39	39	35	32	30	28	26	22
5	67	56	48	42	61	51	44	39	43	37	33	35	31	28	27	25	22	19
6	62	50	42	36	56	46	39	34	38	33	29	31	27	24	25	22	20	17
7	57	45	37	32	52	41	34	30	35	29	26	29	25	22	23	20	18	15
8	53	41	33	28	48	38	31	26	32	26	23	26	22	19	21	18	16	13
9	49	37	30	25	45	34	28	23	29	24	20	24	20	17	19	16	14	12
10	46	34	27	22	42	32	25	21	27	22	18	22	18	16	18	15	13	11

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

	0°	45°	90°
0°	16162	16162	16162
5°	15857	14271	13828
10°	15649	12697	11945
15°	15420	11370	10448
20°	15067	10201	9138
25°	14597	9108	7963
30°	14134	8049	6913
35°	13508	7079	5933
40°	12923	6197	5030
45°	12248	5326	4197
50°	11534	4511	3443
55°	10777	3795	2776
60°	10054	3111	2219
65°	9166	2481	1757
70°	8309	1944	1388
75°	7266	1493	1094
80°	6068	1110	852
85°	4431	808	648

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 12248 cd/sqm



TEST NUMBER: P644394

CATALOG NUMBER: CRQ4DIP-SR4F0-75D100U930-FLLOOB-1DUDD-WW

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	94.5	1.6
10°-20°	268.1	4.5
20°-30°	395.8	6.7
30°-40°	455.1	7.7
40°-50°	441.4	7.4
50°-60°	369.5	6.2
60°-70°	266.2	4.5
70°-80°	162.7	2.7
80°-90°	80.4	1.4
90°-100°	108.0	1.8
100°-110°	558.0	9.4
110°-120°	746.1	12.6
120°-130°	605.7	10.2
130°-140°	486.0	8.2
140°-150°	383.0	6.5
150°-160°	280.1	4.7
160°-170°	173.9	2.9
170°-180°	59.3	1.0
0°-30°	758.4	12.8
0°-40°	1213.5	20.4
0°-60°	2024.4	34.1
0°-90°	2533.7	42.7
90°-120°	1412.1	23.8
90°-150°	2886.8	48.6
90°-180°	3400.0	57.3
0°-180°	5933.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1001	1001	1001	1001	1001	
5°	986	1004	994	996	1002	94
15°	943	957	949	953	960	265
25°	851	865	862	858	864	392
35°	725	736	730	722	722	454
45°	581	587	577	560	551	448
55°	428	434	418	393	380	384
65°	283	284	270	250	243	281
75°	153	153	156	151	148	163
85°	47	56	78	83	83	49
90°	4	32	59	71	73	7
95°	46	71	61	75	84	47
105°	136	193	717	920	616	143
115°	226	266	615	1275	1490	224
125°	316	355	578	1009	1193	280
135°	385	427	581	831	954	296
145°	455	494	585	724	800	286
155°	534	553	596	656	687	245
165°	593	600	612	628	640	166
175°	624	628	624	620	616	59
180°	624	624	624	624	624	

TEST NUMBER: P644394

CATALOG NUMBER: CRQ4DIP-SR4F0-75D100U930-FLLOOB-1DUDD-WW

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1001.0	1001.0	1001.0	1001.0	1001.0
2.5°	992.0	1006.4	997.6	999.9	1001.0
5°	985.5	1003.5	994.0	995.5	1002.5
7.5°	976.4	993.0	984.6	986.5	994.5
10°	968.5	985.1	975.6	978.6	985.5
12.5°	958.3	973.8	966.5	969.5	976.4
15°	943.1	956.9	948.7	953.1	960.0
17.5°	920.4	935.4	926.7	929.1	936.0
20°	903.5	917.3	912.0	912.1	919.0
22.5°	883.1	898.0	893.9	890.7	898.7
25°	851.2	865.0	862.5	858.4	863.9
27.5°	819.5	829.7	824.9	820.7	824.9
30°	794.6	807.1	798.9	794.7	798.9
32.5°	767.5	779.9	771.7	766.4	768.3
35°	725.3	736.4	729.6	722.5	722.5
37.5°	685.5	692.6	688.0	676.1	673.0
40°	656.0	664.3	657.5	643.2	639.1
42.5°	625.5	633.8	625.8	610.4	604.0
45°	581.1	586.6	576.9	559.7	551.4
47.5°	535.3	541.1	527.7	508.8	498.8
50°	504.8	511.7	494.9	474.8	463.8
52.5°	475.4	480.1	464.3	440.9	431.0
55°	428.4	433.9	418.5	392.8	380.3
57.5°	384.6	389.8	371.6	347.0	337.4
60°	356.3	360.4	342.2	316.5	306.8
62.5°	324.6	328.8	311.6	289.3	279.7
65°	282.8	284.2	270.1	250.1	243.2
67.5°	243.5	243.5	231.6	216.8	211.2
70°	216.3	216.3	207.8	196.4	190.9
72.5°	191.4	190.3	185.2	177.2	172.8
75°	152.7	152.7	155.5	151.2	148.5
77.5°	118.8	116.6	128.7	128.1	126.7
80°	96.1	96.1	111.7	114.5	113.1
82.5°	75.8	78.0	98.1	102.1	100.7
85°	46.7	56.3	77.8	83.4	83.4
87.5°	21.2	38.8	62.6	70.8	71.1
90°	4.2	31.6	58.7	71.2	72.6
92.5°	18.2	34.5	59.1	74.8	80.3
95°	45.5	71.0	61.1	75.1	84.2
97.5°	72.7	120.1	252.2	97.8	90.3
100°	91.5	147.1	480.0	160.4	117.1
102.5°	109.2	167.9	638.7	379.2	218.2
105°	135.8	192.7	717.4	920.2	616.0
107.5°	162.3	203.4	682.1	1328.5	1246.2
110°	180.1	219.2	662.1	1393.3	1498.3



TEST NUMBER: P644394

CATALOG NUMBER: CRQ4DIP-SR4F0-75D100U930-FLLOOB-1DUDD-WW

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	198.9	238.0	643.3	1351.8	1527.4
115°	225.7	266.2	615.0	1275.2	1490.1
117.5°	253.1	294.5	607.7	1191.3	1412.3
120°	273.9	313.4	594.0	1127.6	1357.8
122.5°	289.6	331.0	578.3	1073.8	1285.6
125°	315.7	355.1	578.3	1008.8	1193.0
127.5°	336.7	378.6	579.1	933.4	1115.3
130°	348.2	394.2	582.2	883.0	1055.6
132.5°	361.6	407.6	581.1	860.3	1002.2
135°	384.6	426.8	580.8	830.8	953.6
137.5°	404.2	449.5	580.8	798.2	903.4
140°	419.9	462.1	580.8	779.2	875.1
142.5°	435.6	474.7	583.9	757.1	846.8
145°	455.2	493.6	584.7	723.8	800.5
147.5°	478.8	512.5	589.4	699.9	758.9
150°	494.5	525.1	592.6	683.9	733.8
152.5°	510.1	537.8	592.6	671.2	711.9
155°	533.7	552.9	596.5	656.0	686.7
157.5°	552.5	570.9	601.2	646.4	668.7
160°	565.1	580.4	604.3	640.1	659.3
162.5°	574.5	589.9	607.5	636.8	649.9
165°	592.6	600.2	612.2	628.1	639.6
167.5°	602.8	609.7	616.1	624.1	631.0
170°	612.2	616.0	616.1	624.0	627.9
172.5°	615.3	622.2	619.2	620.9	624.7
175°	624.0	627.8	624.0	619.9	616.1
177.5°	624.0	627.0	624.0	623.9	620.8
180°	624.0	624.0	624.0	624.0	624.0

(END OF REPORT)