

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: P644383

Luminaire Tested: CRQ4DIP-SR4F0-50D75U935-FLLFLL-1DUDD-WW

Issue Date: 2/20/2023



**Test Information**

Test Method: LM-79-2019  
Report Number: P644383  
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-SR4F0-50D75U935-FLLFLL-1DUDD-WW  
Description: NEO-RAY CIRQUE SUSPENDED LED LUMINAIRE  
DOWNLIGHT - CURVED FROSTED LENS - 500 LUMENS PER FOOT  
UPLIGHT - CURVED FROSTED LENS - 750 LUMENS PER FOOT  
Light Source: 3500K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

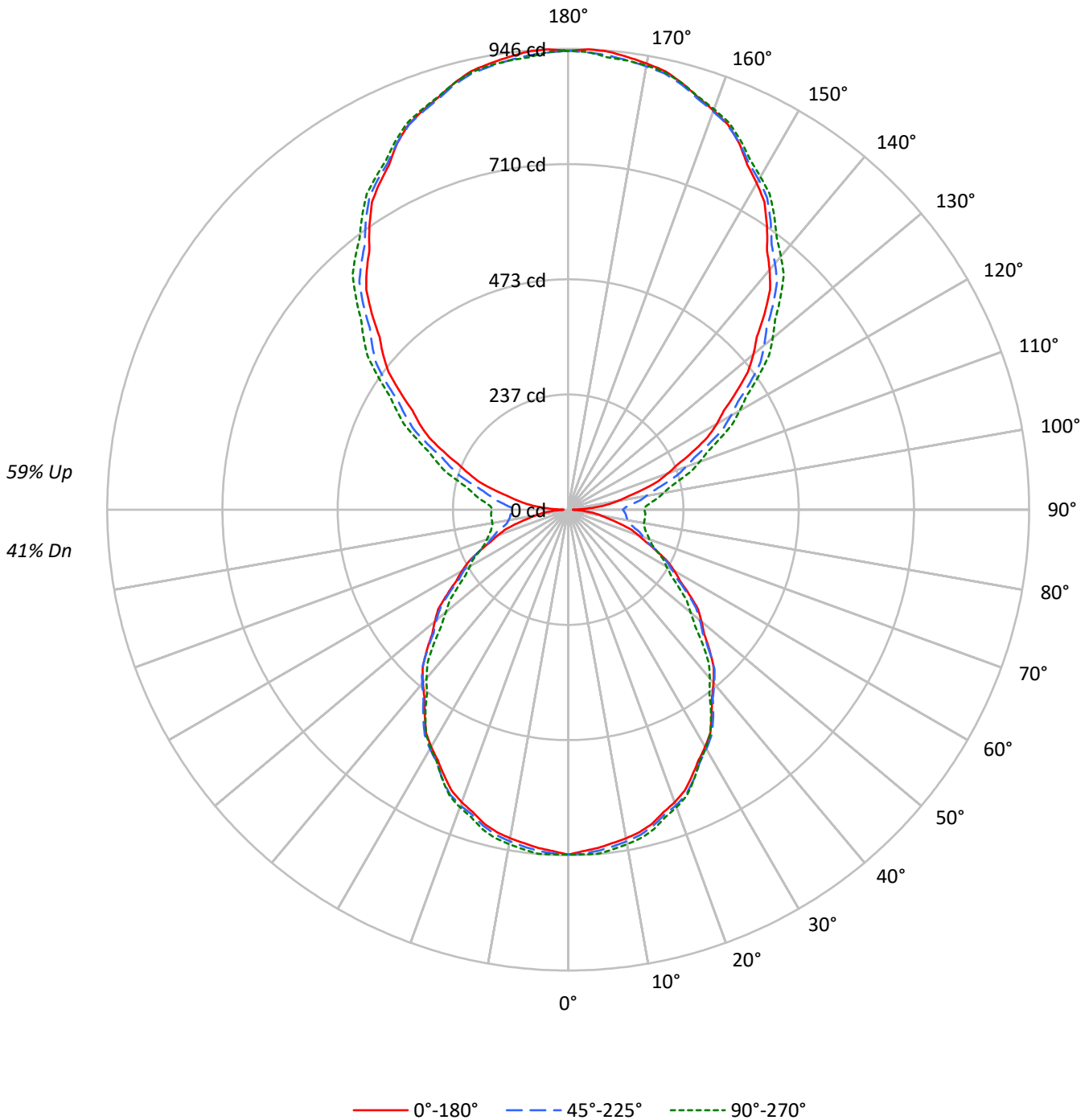
Lumens per Lamp: N/A  
Luminaire Lumens: 4607.3 lumens  
Efficiency: N/A  
Efficacy: 131.3 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.19 / 1.3  
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.33')  
CIE Type: General Diffuse

Input Watts (W): 35.1  
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: P644383

CATALOG NUMBER: CRQ4DIP-SR4F0-50D75U935-FLLFLL-1DUDD-WW

### Luminous Intensity Polar Plot





TEST NUMBER: P644383

CATALOG NUMBER: CRQ4DIP-SR4F0-50D75U935-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	79	79	79	63	63	63	48	48	48	41																				
1	95	91	86	83	86	83	79	76	68	65	63	54	52	51	41	40	39	33																				
2	86	79	73	67	78	72	67	62	59	55	52	47	44	42	36	34	33	28																				
3	79	69	62	56	71	63	57	52	52	47	43	42	38	36	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	55	46	40	60	50	43	38	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	24	21	18	15																				
7	56	44	36	31	51	41	34	29	34	28	24	27	23	20	22	19	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°	11431	11431	11431
5°	11215	10093	9780
10°	11068	8993	8448
15°	10906	8054	7390
20°	10656	7225	6463
25°	10323	6442	5632
30°	9997	5712	4889
35°	9554	5036	4196
40°	9141	4392	3557
45°	8663	3776	2968
50°	8157	3218	2435
55°	7622	2703	2015
60°	7111	2237	1685
65°	6482	1846	1445
70°	5877	1534	1286
75°	5139	1334	1209
80°	4294	1233	1190
85°	3131	1236	1234

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 8663 cd/sqm



TEST NUMBER: P644383

CATALOG NUMBER: CRQ4DIP-SR4F0-50D75U935-FLLFLL-1DUDD-WW

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	66.9	1.5
10°-20°	189.8	4.1
20°-30°	280.3	6.1
30°-40°	322.6	7.0
40°-50°	313.2	6.8
50°-60°	264.7	5.7
60°-70°	201.6	4.4
70°-80°	146.9	3.2
80°-90°	117.1	2.5
90°-100°	134.2	2.9
100°-110°	213.1	4.6
110°-120°	313.4	6.8
120°-130°	405.2	8.8
130°-140°	458.3	9.9
140°-150°	452.8	9.8
150°-160°	383.0	8.3
160°-170°	255.0	5.5
170°-180°	89.2	1.9
0°-30°	536.9	11.7
0°-40°	859.5	18.7
0°-60°	1437.4	31.2
0°-90°	1903.1	41.3
90°-120°	660.7	14.3
90°-150°	1977.1	42.9
90°-180°	2704.0	58.7
0°-180°	4607.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	708	708	708	708	708	
5°	697	710	703	704	709	66
15°	667	679	672	674	679	188
25°	602	614	610	607	611	277
35°	513	524	519	511	511	321
45°	411	418	409	396	390	317
55°	303	311	298	281	276	272
65°	200	207	201	200	200	199
75°	108	116	139	158	164	115
85°	33	63	119	150	159	35
90°	10	53	112	145	156	9
95°	55	75	132	164	171	55
105°	157	165	204	232	237	167
115°	282	294	318	337	342	280
125°	421	436	456	472	476	377
135°	570	583	594	609	616	439
145°	711	720	724	729	737	444
155°	830	835	831	832	837	381
165°	906	910	903	900	906	255
175°	944	948	936	932	932	90
180°	942	942	942	942	942	

TEST NUMBER: P644383

CATALOG NUMBER: CRQ4DIP-SR4F0-50D75U935-FLLFLL-1DUDD-WW

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	708.0	708.0	708.0	708.0	708.0
2.5°	701.6	711.8	706.4	707.2	708.0
5°	697.0	709.7	703.0	704.1	709.0
7.5°	690.6	703.1	697.4	697.7	703.4
10°	685.0	696.7	691.0	692.1	697.0
12.5°	677.8	690.3	683.8	685.7	690.6
15°	667.0	678.7	672.0	674.1	679.0
17.5°	651.0	662.5	656.4	657.1	662.0
20°	639.0	649.8	646.0	645.1	650.0
22.5°	624.6	636.1	633.2	629.9	635.6
25°	602.0	613.7	610.0	607.1	611.0
27.5°	579.6	590.4	584.6	580.5	583.4
30°	562.0	572.8	567.0	562.1	565.0
32.5°	542.8	554.3	547.8	542.0	543.4
35°	513.0	523.8	519.0	511.0	511.0
37.5°	484.8	493.8	487.6	478.2	476.0
40°	464.0	473.8	466.0	454.9	452.0
42.5°	442.4	452.2	444.4	431.7	427.2
45°	411.0	417.8	409.0	395.9	390.0
47.5°	378.6	386.4	374.6	359.8	352.8
50°	357.0	364.8	353.0	335.8	328.0
52.5°	336.2	343.2	330.6	312.7	306.4
55°	303.0	310.8	298.0	280.9	276.0
57.5°	272.0	279.6	266.0	254.5	249.8
60°	252.0	258.8	246.0	236.9	233.0
62.5°	229.6	237.2	226.0	221.7	219.4
65°	200.0	206.8	201.0	200.0	200.0
67.5°	172.2	178.1	177.6	183.6	185.8
70°	153.0	158.9	164.0	174.1	177.0
72.5°	135.4	141.3	153.6	166.9	170.6
75°	108.0	115.8	139.0	158.1	164.0
77.5°	84.0	93.0	128.8	152.6	159.6
80°	68.0	81.7	124.0	150.2	158.0
82.5°	53.6	72.0	120.8	150.2	158.0
85°	33.0	63.3	119.0	150.2	159.0
87.5°	16.4	57.1	116.0	148.4	158.4
90°	10.0	53.0	112.0	145.2	156.0
92.5°	26.8	58.9	118.4	150.8	159.2
95°	55.0	74.6	132.0	164.2	171.0
97.5°	83.0	95.9	149.4	179.4	186.0
100°	103.0	112.8	163.0	192.1	198.0
102.5°	124.6	132.0	179.0	206.6	213.2
105°	157.0	164.8	204.0	232.1	237.0
107.5°	193.0	201.4	234.6	261.1	266.2
110°	217.0	227.8	257.0	281.1	287.0

TEST NUMBER: P644383

CATALOG NUMBER: CRQ4DIP-SR4F0-50D75U935-FLLFLL-1DUDD-WW

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	243.4	254.2	280.2	302.7	308.6
115°	282.0	293.7	318.0	337.1	342.0
117.5°	322.4	334.9	357.0	374.9	379.6
120°	352.0	363.7	385.0	402.1	406.0
122.5°	378.4	391.7	413.0	430.1	434.0
125°	421.0	435.7	456.0	472.1	476.0
127.5°	464.8	479.1	497.8	514.1	519.2
130°	496.0	508.7	525.0	542.1	548.0
132.5°	524.8	537.5	552.2	569.4	576.0
135°	570.0	582.7	594.0	609.2	616.0
137.5°	613.4	625.7	634.4	646.4	655.0
140°	643.0	653.8	660.0	671.2	679.0
142.5°	670.2	681.0	685.6	695.2	703.0
145°	711.0	719.8	724.0	729.2	737.0
147.5°	749.2	757.8	759.6	764.1	769.0
150°	774.0	781.8	782.0	784.1	789.0
152.5°	797.2	804.2	802.0	803.3	809.0
155°	830.0	834.9	831.0	832.1	837.0
157.5°	856.0	860.9	854.8	856.7	860.6
160°	872.0	876.9	870.0	871.1	875.0
162.5°	887.2	890.5	884.4	883.1	888.6
165°	906.0	909.9	903.0	900.1	906.0
167.5°	922.0	925.9	916.8	913.7	919.6
170°	930.0	933.9	924.0	920.1	926.0
172.5°	937.2	941.1	930.4	925.7	930.0
175°	944.0	947.9	936.0	932.0	932.0
177.5°	946.0	948.3	939.6	935.7	940.4
180°	942.0	942.0	942.0	942.0	942.0

(END OF REPORT)