

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: P644381

Luminaire Tested: CRQ4DIP-SR4F0-50D75U930-FLLFLL-1DUDD-WW

Issue Date: 2/20/2023



**Test Information**

Test Method: LM-79-2019  
Report Number: P644381  
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-SR4F0-50D75U930-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: 3000K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

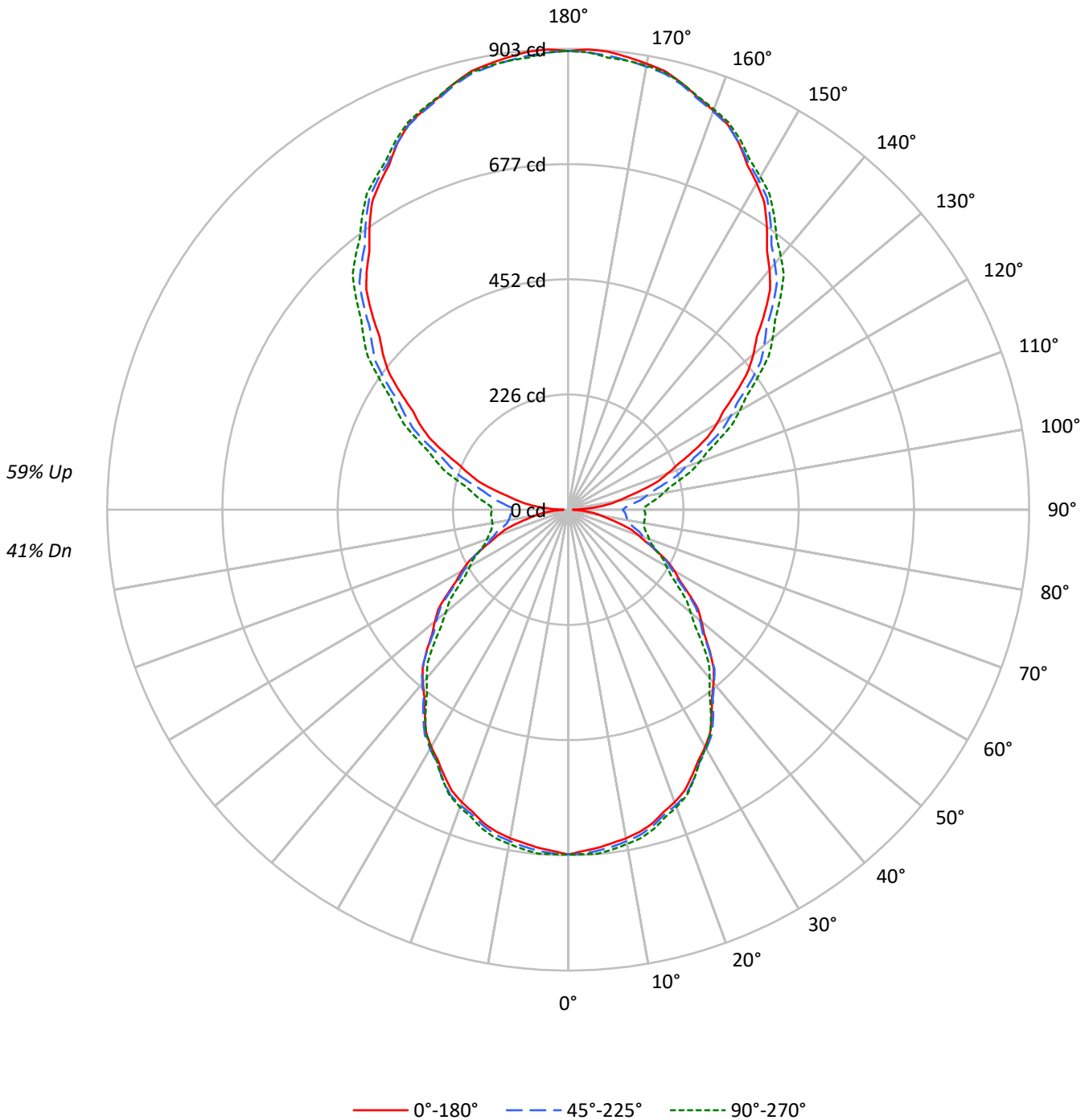
Lumens per Lamp: N/A  
Luminaire Lumens: 4396.3 lumens  
Efficiency: N/A  
Efficacy: 125.3 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.19 / 1.3  
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.33')  
CIE Type: General Diffuse

Input Watts (W): 35.1  
Input Voltage (V): 120  
Input Current (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

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### Luminous Intensity Polar Plot





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**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°	10908	10908	10908
5°	10702	9631	9332
10°	10561	8582	8061
15°	10407	7685	7051
20°	10168	6894	6167
25°	9850	6147	5374
30°	9540	5450	4665
35°	9116	4805	4004
40°	8723	4192	3394
45°	8266	3604	2832
50°	7785	3070	2324
55°	7272	2579	1923
60°	6787	2134	1608
65°	6184	1762	1378
70°	5608	1464	1228
75°	4906	1273	1153
80°	4098	1176	1136
85°	2989	1180	1178

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 8266 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	63.8	1.5
10°-20°	181.1	4.1
20°-30°	267.4	6.1
30°-40°	307.9	7.0
40°-50°	298.8	6.8
50°-60°	252.6	5.7
60°-70°	192.4	4.4
70°-80°	140.2	3.2
80°-90°	111.7	2.5
90°-100°	128.1	2.9
100°-110°	203.4	4.6
110°-120°	299.0	6.8
120°-130°	386.7	8.8
130°-140°	437.3	9.9
140°-150°	432.1	9.8
150°-160°	365.5	8.3
160°-170°	243.3	5.5
170°-180°	85.1	1.9
0°-30°	512.3	11.7
0°-40°	820.2	18.7
0°-60°	1371.6	31.2
0°-90°	1815.9	41.3
90°-120°	630.5	14.3
90°-150°	1886.5	42.9
90°-180°	2580.0	58.7
0°-180°	4396.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	676	676	676	676	676	
5°	665	677	671	672	676	63
15°	636	648	641	643	648	179
25°	574	586	582	579	583	265
35°	490	500	495	488	488	307
45°	392	399	390	378	372	302
55°	289	297	284	268	263	259
65°	191	197	192	191	191	190
75°	103	110	133	151	156	110
85°	32	60	114	143	152	33
90°	10	51	107	139	149	8
95°	52	71	126	157	163	53
105°	150	157	195	222	226	160
115°	269	280	303	322	326	267
125°	402	416	435	450	454	360
135°	544	556	567	581	588	419
145°	678	687	691	696	703	424
155°	792	797	793	794	799	364
165°	864	868	862	859	864	244
175°	901	904	893	889	889	85
180°	899	899	899	899	899	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	675.6	675.6	675.6	675.6	675.6
2.5°	669.5	679.2	674.1	674.8	675.6
5°	665.1	677.2	670.8	671.9	676.5
7.5°	659.0	670.9	665.5	665.8	671.2
10°	653.6	664.8	659.4	660.4	665.1
12.5°	646.8	658.7	652.5	654.3	659.0
15°	636.5	647.7	641.2	643.2	647.9
17.5°	621.2	632.2	626.3	627.0	631.7
20°	609.7	620.0	616.4	615.6	620.2
22.5°	596.0	607.0	604.2	601.1	606.5
25°	574.4	585.6	582.1	579.3	583.0
27.5°	553.1	563.3	557.8	553.9	556.7
30°	536.3	546.5	541.0	536.3	539.1
32.5°	517.9	529.0	522.7	517.2	518.5
35°	489.5	499.8	495.2	487.6	487.6
37.5°	462.6	471.2	465.3	456.3	454.2
40°	442.8	452.1	444.7	434.1	431.3
42.5°	422.1	431.5	424.0	411.9	407.6
45°	392.2	398.7	390.3	377.7	372.1
47.5°	361.3	368.7	357.4	343.4	336.6
50°	340.7	348.1	336.8	320.4	313.0
52.5°	320.8	327.5	315.5	298.3	292.4
55°	289.1	296.6	284.4	268.0	263.4
57.5°	259.5	266.8	253.8	242.8	238.4
60°	240.5	247.0	234.7	226.1	222.3
62.5°	219.1	226.4	215.7	211.6	209.4
65°	190.8	197.4	191.8	190.8	190.8
67.5°	164.3	169.9	169.5	175.2	177.3
70°	146.0	151.6	156.5	166.1	168.9
72.5°	129.2	134.8	146.6	159.2	162.8
75°	103.1	110.5	132.6	150.9	156.5
77.5°	80.2	88.7	122.9	145.6	152.3
80°	64.9	77.9	118.3	143.3	150.8
82.5°	51.1	68.7	115.3	143.3	150.8
85°	31.5	60.4	113.6	143.3	151.7
87.5°	15.6	54.5	110.7	141.6	151.1
90°	9.5	50.6	106.9	138.6	148.9
92.5°	25.6	56.2	113.0	143.9	151.9
95°	52.5	71.1	126.0	156.6	163.2
97.5°	79.2	91.5	142.6	171.1	177.5
100°	98.3	107.6	155.5	183.3	188.9
102.5°	118.9	126.0	170.8	197.1	203.4
105°	149.8	157.3	194.7	221.5	226.1
107.5°	184.2	192.2	223.9	249.2	254.0
110°	207.1	217.3	245.2	268.3	273.9

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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	232.3	242.5	267.4	288.9	294.5
115°	269.1	280.3	303.4	321.7	326.3
117.5°	307.6	319.6	340.7	357.7	362.2
120°	335.9	347.1	367.4	383.7	387.4
122.5°	361.1	373.8	394.1	410.4	414.1
125°	401.7	415.7	435.1	450.5	454.2
127.5°	443.5	457.1	475.0	490.6	495.4
130°	473.3	485.4	501.0	517.3	522.9
132.5°	500.8	512.9	526.9	543.3	549.6
135°	543.9	556.0	566.8	581.3	587.8
137.5°	585.3	597.1	605.3	616.8	625.0
140°	613.6	623.8	629.8	640.4	647.9
142.5°	639.5	649.8	654.2	663.3	670.8
145°	678.4	686.8	690.8	695.8	703.3
147.5°	714.9	723.1	724.8	729.1	733.8
150°	738.6	746.0	746.2	748.2	752.9
152.5°	760.7	767.4	765.3	766.5	772.0
155°	792.0	796.7	792.9	794.0	798.7
157.5°	816.8	821.5	815.7	817.5	821.2
160°	832.1	836.7	830.2	831.2	834.9
162.5°	846.6	849.7	843.9	842.7	847.9
165°	864.5	868.2	861.6	858.9	864.5
167.5°	879.8	883.5	874.8	871.9	877.5
170°	887.4	891.1	881.7	878.0	883.6
172.5°	894.3	898.0	887.8	883.3	887.4
175°	900.8	904.5	893.1	889.3	889.3
177.5°	902.7	904.9	896.6	892.9	897.3
180°	898.9	898.9	898.9	898.9	898.9

(END OF REPORT)