

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: P644368

Luminaire Tested: CRQ4DIP-SR4F0-50D50U840-FLLOOB-1DUDD-WW

Issue Date: 2/20/2023



**Test Information**

Test Method: LM-79-2019  
Report Number: P644368  
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-SR4F0-50D50U840-FLLOOB-1DUDD-WW  
Description: NEO-RAY CIRQUE SUSPENDED LED LUMINAIRE  
DOWNLIGHT - CURVED FROSTED LENS - 500 LUMENS PER FOOT  
UPLIGHT - BATWING OPTIC - 500 LUMENS PER FOOT  
Light Source: 4000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

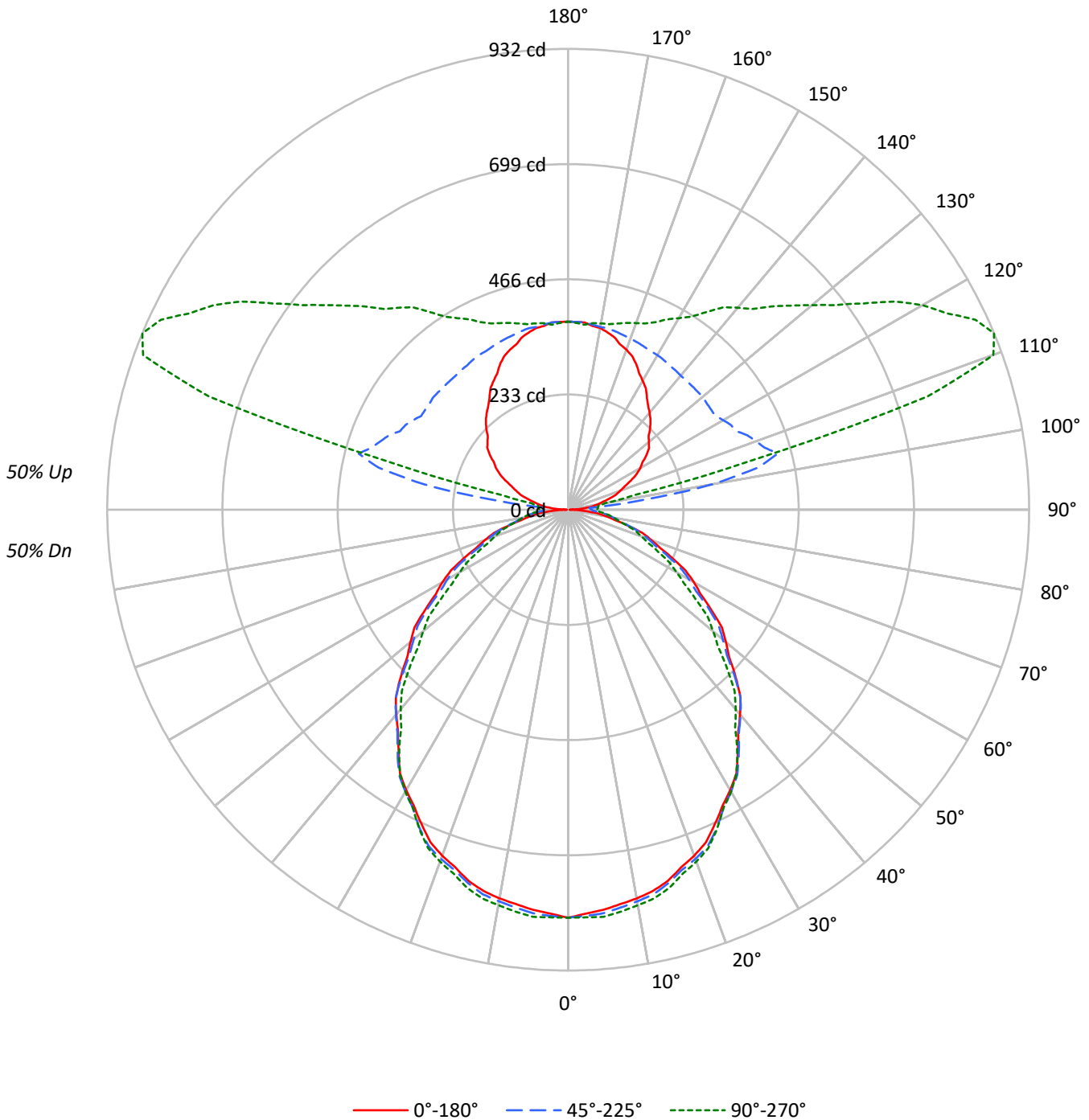
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4170.4 lumens  
Efficiency: N/A  
Efficacy: 144.3 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): 28.9  
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

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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	107	107	107	107	99	99	99	99	83	83	83	69	69	69	56	56	56	50																				
1	98	93	89	86	90	86	83	80	73	70	68	61	59	57	49	48	47	42																				
2	89	81	75	70	82	75	70	65	64	60	56	53	50	48	44	41	40	35																				
3	81	72	64	58	75	66	60	55	56	52	48	47	44	41	39	36	34	30																				
4	74	63	56	50	68	59	52	47	50	45	41	42	38	35	35	32	29	26																				
5	68	57	49	43	63	53	45	40	45	39	35	38	34	30	31	28	26	22																				
6	63	51	43	37	58	47	40	35	41	35	31	34	30	27	28	25	23	20																				
7	58	46	38	32	54	43	36	31	37	31	27	31	27	24	26	23	20	18																				
8	54	42	34	29	50	39	32	27	34	28	24	29	24	21	24	21	18	16																				
9	50	38	31	26	46	36	29	24	31	25	22	26	22	19	22	19	16	14																				
10	47	35	28	23	43	33	26	22	28	23	19	24	20	17	20	17	15	13																				

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

	0°	45°	90°
0°	13322	13322	13322
5°	13070	11763	11398
10°	12899	10465	9846
15°	12709	9372	8612
20°	12419	8408	7532
25°	12031	7508	6564
30°	11651	6634	5698
35°	11133	5834	4890
40°	10651	5108	4146
45°	10096	4390	3459
50°	9505	3718	2838
55°	8882	3129	2288
60°	8288	2564	1829
65°	7555	2045	1448
70°	6849	1602	1143
75°	5991	1231	902
80°	5001	915	702
85°	3653	666	534

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 10096 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	77.9	1.9
10°-20°	221.0	5.3
20°-30°	326.2	7.8
30°-40°	375.1	9.0
40°-50°	363.8	8.7
50°-60°	304.6	7.3
60°-70°	219.4	5.3
70°-80°	134.1	3.2
80°-90°	66.0	1.6
90°-100°	72.5	1.7
100°-110°	342.4	8.2
110°-120°	455.5	10.9
120°-130°	369.4	8.9
130°-140°	296.2	7.1
140°-150°	233.4	5.6
150°-160°	170.7	4.1
160°-170°	106.0	2.5
170°-180°	36.1	0.9
0°-30°	625.1	15.0
0°-40°	1000.2	24.0
0°-60°	1668.6	40.0
0°-90°	2088.2	50.1
90°-120°	870.5	20.9
90°-150°	1769.5	42.4
90°-180°	2082.0	49.9
0°-180°	4170.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	825	825	825	825	825	
5°	812	827	819	821	826	77
15°	777	789	782	786	791	219
25°	702	713	711	708	712	323
35°	598	607	601	596	596	374
45°	479	484	476	461	454	369
55°	353	358	345	324	314	317
65°	233	234	223	206	200	232
75°	126	126	128	125	122	135
85°	38	46	64	69	69	41
90°	4	25	47	56	57	5
95°	31	46	44	54	60	31
105°	86	119	439	563	379	91
115°	140	163	375	778	909	138
125°	194	217	353	615	727	172
135°	234	260	354	506	581	181
145°	277	301	356	441	488	174
155°	325	337	364	400	418	149
165°	361	366	373	383	390	101
175°	380	382	380	378	375	36
180°	380	380	380	380	380	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	825.1	825.1	825.1	825.1	825.1
2.5°	817.6	829.5	822.3	824.2	825.1
5°	812.3	827.1	819.3	820.6	826.3
7.5°	804.8	818.5	811.6	813.1	819.7
10°	798.3	812.0	804.1	806.6	812.3
12.5°	789.9	802.7	796.7	799.1	804.8
15°	777.3	788.7	782.0	785.6	791.3
17.5°	758.7	771.0	763.8	765.8	771.5
20°	744.7	756.1	751.7	751.8	757.5
22.5°	727.9	740.2	736.8	734.1	740.7
25°	701.6	713.0	710.9	707.5	712.1
27.5°	675.5	683.9	679.9	676.5	679.9
30°	655.0	665.2	658.5	655.0	658.5
32.5°	632.6	642.8	636.1	631.7	633.3
35°	597.8	607.0	601.3	595.5	595.5
37.5°	565.0	570.9	567.1	557.2	554.7
40°	540.7	547.6	541.9	530.2	526.8
42.5°	515.6	522.4	515.8	503.1	497.9
45°	479.0	483.5	475.5	461.3	454.5
47.5°	441.2	446.0	434.9	419.4	411.2
50°	416.0	421.7	407.9	391.4	382.3
52.5°	391.8	395.7	382.7	363.4	355.2
55°	353.1	357.7	345.0	323.7	313.5
57.5°	317.0	321.3	306.3	286.0	278.1
60°	293.7	297.1	282.0	260.9	252.9
62.5°	267.6	271.0	256.9	238.5	230.5
65°	233.1	234.2	222.6	206.1	200.4
67.5°	200.7	200.7	190.9	178.7	174.1
70°	178.3	178.3	171.3	161.9	157.3
72.5°	157.8	156.9	152.7	146.1	142.4
75°	125.9	125.9	128.2	124.6	122.4
77.5°	97.9	96.1	106.1	105.6	104.4
80°	79.2	79.2	92.1	94.4	93.2
82.5°	62.5	64.3	80.9	84.1	83.0
85°	38.5	46.4	64.1	68.8	68.8
87.5°	17.5	31.9	51.3	57.8	58.1
90°	3.5	25.2	46.7	56.1	57.3
92.5°	13.0	25.6	45.0	56.4	60.3
95°	30.8	46.0	43.6	54.3	60.1
97.5°	47.9	75.0	158.3	66.0	61.7
100°	59.4	91.2	296.1	102.9	77.1
102.5°	70.0	103.6	391.9	235.3	137.5
105°	85.8	118.7	438.6	563.4	378.7
107.5°	101.6	124.9	416.5	811.2	761.4
110°	112.1	134.5	404.1	850.2	914.5



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	123.6	146.0	392.6	824.5	931.8
115°	139.7	163.2	375.4	777.7	908.6
117.5°	156.0	180.4	370.8	726.1	860.8
120°	168.4	191.9	362.2	687.1	827.4
122.5°	178.0	202.4	352.7	654.3	783.4
125°	193.6	217.0	352.7	614.7	726.9
127.5°	206.0	231.3	353.2	568.8	679.6
130°	212.8	240.8	355.1	538.0	643.2
132.5°	220.5	248.5	354.1	524.2	610.7
135°	234.3	260.1	353.9	506.2	581.1
137.5°	246.3	273.9	353.9	486.4	550.5
140°	255.9	281.6	353.9	474.8	533.2
142.5°	265.4	289.3	355.8	461.3	516.0
145°	277.4	300.8	356.3	441.0	487.8
147.5°	291.7	312.3	359.2	426.5	462.5
150°	301.3	320.0	361.1	416.8	447.2
152.5°	310.9	327.7	361.1	409.0	433.8
155°	325.2	336.9	363.5	399.8	418.5
157.5°	336.7	347.9	366.3	393.9	407.5
160°	344.3	353.7	368.2	390.0	401.7
162.5°	350.1	359.4	370.2	388.0	396.0
165°	361.1	365.7	373.0	382.8	389.8
167.5°	367.3	371.5	375.4	380.3	384.5
170°	373.0	375.4	375.4	380.3	382.6
172.5°	374.9	379.1	377.3	378.3	380.7
175°	380.2	382.5	380.2	377.8	375.4
177.5°	380.2	382.1	380.2	380.2	378.3
180°	380.2	380.2	380.2	380.2	380.2

(END OF REPORT)