

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: P644382

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

Issue Date: 2/20/2023



**Test Information**

Test Method: LM-79-2019  
Report Number: P644382  
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-SR4F0-50D75U930-FLLOOB-1DUDD-WW  
Description: NEO-RAY CIRQUE SUSPENDED LED LUMINAIRE  
DOWNLIGHT - CURVED FROSTED LENS - 500 LUMENS PER FOOT  
UPLIGHT - BATWING OPTIC - 750 LUMENS PER FOOT  
Light Source: 3000K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

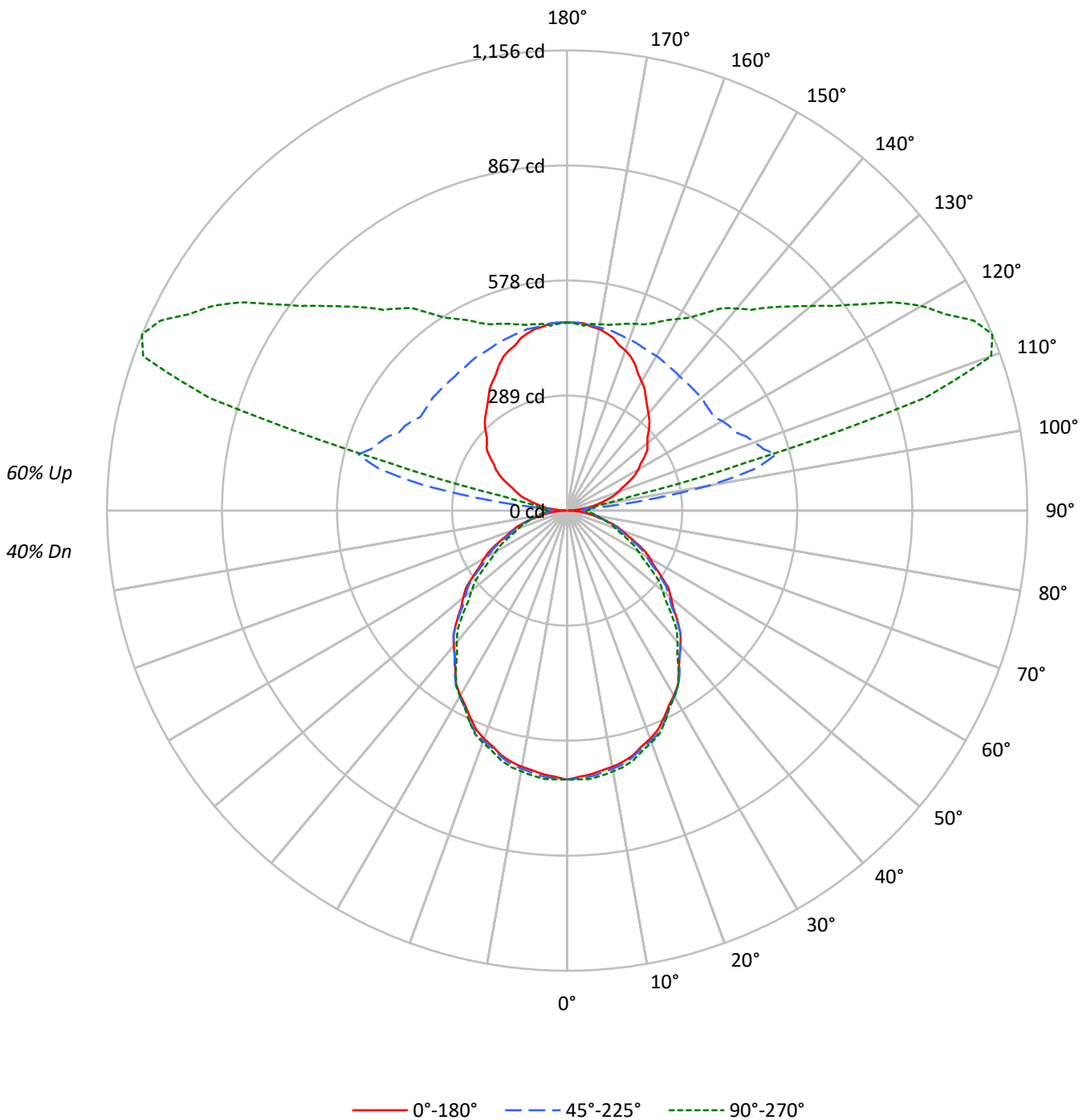
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4280.5 lumens  
Efficiency: N/A  
Efficacy: 122.0 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-Indirect

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				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	95	95	95	95	78	78	78	62	62	62	47	47	47	40
1	95	91	87	84	87	83	80	77	68	66	63	54	52	51	41	40	39	33
2	87	80	73	68	79	73	67	63	59	56	53	47	45	43	36	35	33	28
3	79	70	63	57	72	64	58	53	53	48	44	42	39	36	32	30	28	24
4	73	62	54	48	66	57	50	45	47	42	38	37	34	31	29	26	24	20
5	67	55	47	41	60	51	44	38	42	37	33	34	30	27	26	23	21	18
6	61	49	41	36	56	45	38	33	38	32	28	30	27	24	24	21	19	16
7	57	45	37	31	51	41	34	29	34	29	25	28	24	21	22	19	17	14
8	53	40	33	28	48	37	30	26	31	26	22	25	21	19	20	17	15	13
9	49	37	30	25	44	34	27	23	28	23	20	23	19	17	18	16	14	11
10	46	34	27	22	42	31	25	21	26	21	18	21	18	15	17	14	12	10

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

	0°	45°	90°
0°	10908	10908	10908
5°	10702	9631	9332
10°	10561	8569	8061
15°	10407	7674	7051
20°	10168	6884	6167
25°	9850	6147	5374
30°	9540	5431	4665
35°	9116	4777	4004
40°	8723	4182	3394
45°	8266	3594	2832
50°	7785	3045	2324
55°	7272	2561	1874
60°	6787	2099	1498
65°	6184	1675	1185
70°	5608	1312	936
75°	4906	1008	739
80°	4098	749	575
85°	2989	545	437

**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°	180.9	4.2
20°-30°	267.1	6.2
30°-40°	307.1	7.2
40°-50°	297.9	7.0
50°-60°	249.4	5.8
60°-70°	179.7	4.2
70°-80°	109.8	2.6
80°-90°	54.4	1.3
90°-100°	79.2	1.9
100°-110°	421.6	9.8
110°-120°	564.6	13.2
120°-130°	458.4	10.7
130°-140°	368.0	8.6
140°-150°	290.0	6.8
150°-160°	212.0	5.0
160°-170°	131.7	3.1
170°-180°	44.9	1.0
0°-30°	511.8	12.0
0°-40°	818.9	19.1
0°-60°	1366.2	31.9
0°-90°	1710.1	40.0
90°-120°	1065.3	24.9
90°-150°	2181.7	51.0
90°-180°	2570.0	60.0
0°-180°	4280.5	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	646	640	643	648	179
25°	574	584	582	579	583	265
35°	490	497	492	488	488	307
45°	392	396	389	378	372	302
55°	289	293	282	265	257	259
65°	191	192	182	169	164	190
75°	103	103	105	102	100	110
85°	32	38	52	56	56	33
90°	3	22	40	49	50	5
95°	33	53	44	54	60	35
105°	102	145	543	696	465	107
115°	170	201	465	965	1128	169
125°	238	269	438	764	903	212
135°	291	323	440	629	722	224
145°	345	374	443	548	606	216
155°	404	419	452	497	520	186
165°	449	454	464	476	484	126
175°	472	475	472	469	466	45
180°	472	472	472	472	472	



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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	673.3	674.8	675.6
5°	665.1	677.2	670.8	671.9	676.5
7.5°	659.0	670.2	664.5	665.8	671.2
10°	653.6	664.8	658.4	660.4	665.1
12.5°	646.8	657.2	652.3	654.3	659.0
15°	636.5	645.8	640.3	643.2	647.9
17.5°	621.2	631.3	625.4	627.0	631.7
20°	609.7	619.1	615.5	615.6	620.2
22.5°	596.0	606.1	603.2	601.1	606.5
25°	574.4	583.8	582.1	579.3	583.0
27.5°	553.1	560.0	556.7	553.9	556.7
30°	536.3	544.7	539.1	536.3	539.1
32.5°	517.9	526.3	520.8	517.2	518.5
35°	489.5	497.0	492.4	487.6	487.6
37.5°	462.6	467.5	464.3	456.3	454.2
40°	442.8	448.3	443.7	434.1	431.3
42.5°	422.1	427.7	422.3	411.9	407.6
45°	392.2	395.9	389.3	377.7	372.1
47.5°	361.3	365.2	356.1	343.4	336.6
50°	340.7	345.3	334.0	320.4	313.0
52.5°	320.8	324.0	313.4	297.6	290.8
55°	289.1	292.9	282.4	265.1	256.7
57.5°	259.5	263.1	250.8	234.2	227.7
60°	240.5	243.3	230.9	213.6	207.1
62.5°	219.1	221.9	210.3	195.3	188.7
65°	190.8	191.8	182.3	168.8	164.1
67.5°	164.3	164.3	156.3	146.3	142.6
70°	146.0	146.0	140.3	132.5	128.8
72.5°	129.2	128.5	125.0	119.6	116.6
75°	103.1	103.1	105.0	102.1	100.2
77.5°	80.2	78.7	86.8	86.4	85.5
80°	64.9	64.9	75.4	77.3	76.3
82.5°	51.1	52.6	66.2	68.9	67.9
85°	31.5	38.0	52.5	56.3	56.3
87.5°	14.3	26.3	42.4	48.0	48.2
90°	2.9	21.6	40.3	49.0	49.9
92.5°	13.0	24.3	41.3	52.5	56.5
95°	33.3	52.7	43.8	53.6	60.4
97.5°	53.6	90.3	189.2	71.6	65.8
100°	67.9	110.8	362.1	119.5	86.5
102.5°	81.4	126.6	482.6	285.5	163.5
105°	101.6	145.4	542.6	695.6	465.1
107.5°	121.9	153.7	516.1	1005.2	942.8
110°	135.4	165.6	501.1	1054.5	1133.8



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	149.7	179.9	486.8	1023.2	1156.1
115°	170.1	201.2	465.4	965.3	1128.0
117.5°	190.9	222.6	459.9	901.9	1069.2
120°	206.8	236.9	449.6	853.7	1028.0
122.5°	218.7	250.4	437.7	813.0	973.4
125°	238.5	268.6	437.7	763.8	903.2
127.5°	254.6	286.4	438.3	706.7	844.4
130°	263.4	298.2	440.7	668.5	799.3
132.5°	273.7	308.6	439.9	651.4	758.8
135°	291.2	323.1	439.7	629.0	722.0
137.5°	306.0	340.3	439.7	604.4	684.0
140°	317.9	349.9	439.7	589.9	662.6
142.5°	329.8	359.4	442.1	573.2	641.2
145°	344.7	373.7	442.7	548.0	606.1
147.5°	362.5	388.1	446.3	529.9	574.6
150°	374.4	397.6	448.7	517.8	555.6
152.5°	386.3	407.2	448.7	508.2	539.0
155°	404.1	418.6	451.6	496.7	520.0
157.5°	418.3	432.3	455.2	489.4	506.3
160°	427.9	439.5	457.6	484.6	499.2
162.5°	435.0	446.6	459.9	482.2	492.0
165°	448.7	454.5	463.5	475.6	484.3
167.5°	456.4	461.6	466.5	472.5	477.8
170°	463.5	466.4	466.5	472.5	475.4
172.5°	465.9	471.1	468.9	470.1	473.0
175°	472.4	475.3	472.4	469.4	466.5
177.5°	472.4	474.7	472.4	472.4	470.0
180°	472.4	472.4	472.4	472.4	472.4

(END OF REPORT)