

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: P644330

Luminaire Tested: CRQ4DIP-SR4F0-50D125U835-FLLOOB-1DUDD-WW

Issue Date: 2/20/2023



**Test Information**

Test Method: LM-79-2019  
Report Number: P644330  
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-SR4F0-50D125U835-FLLOOB-1DUDD-WW  
Description: NEO-RAY CIRQUE SUSPENDED LED LUMINAIRE  
DOWNLIGHT - CURVED FROSTED LENS - 500 LUMENS PER FOOT  
UPLIGHT - BATWING OPTIC - 1250 LUMENS PER FOOT  
Light Source: 3500K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

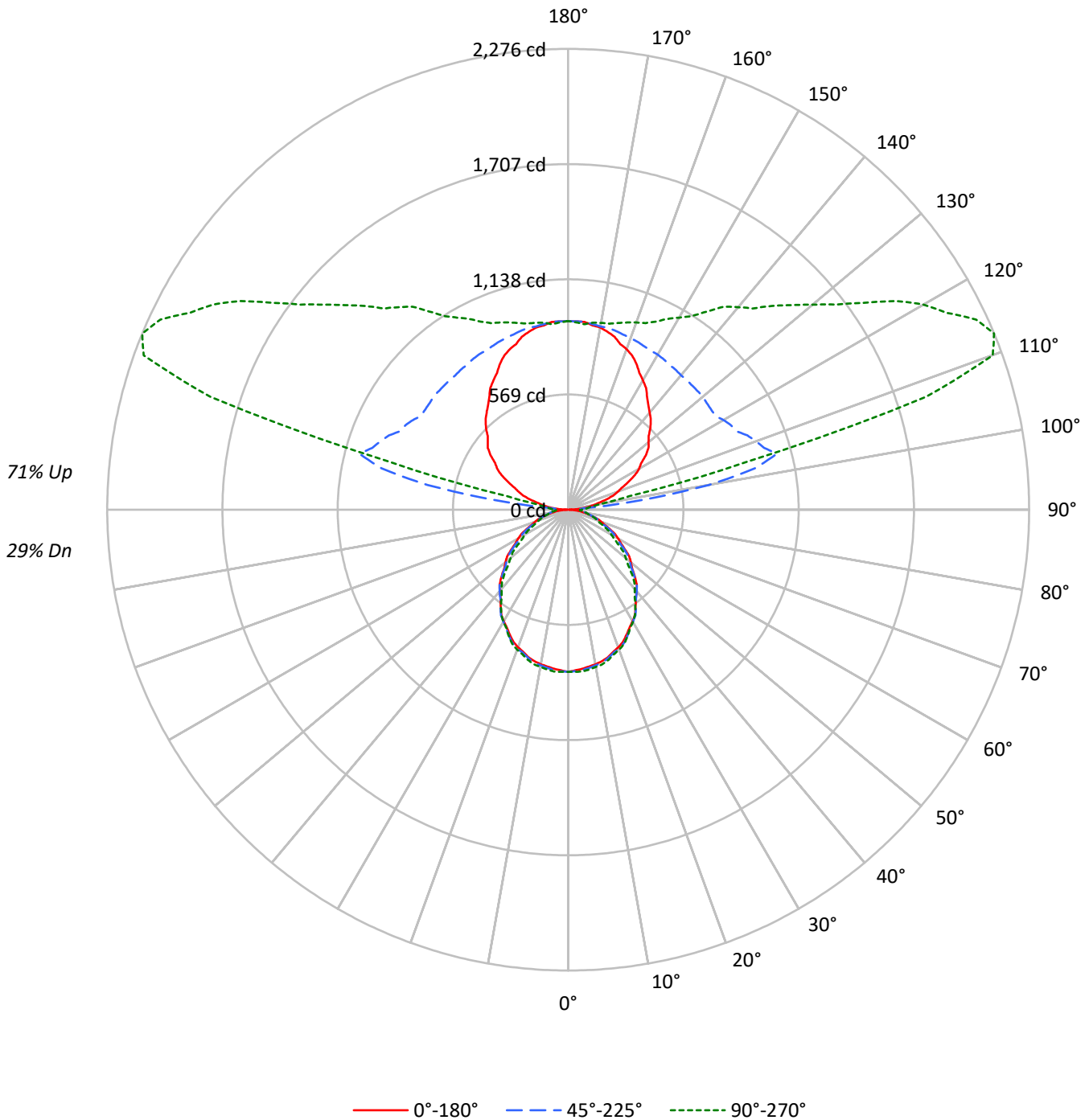
Lumens per Lamp: N/A  
Luminaire Lumens: 7069.0 lumens  
Efficiency: N/A  
Efficacy: 134.6 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.19 / 1.3  
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.33')  
CIE Type: Semi-Indirect

Input Watts (W): 52.5  
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					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	0	
RCR																						
0	102	102	102	102	91	91	91	91	72	72	72	53	53	53	37	37	37	29				
1	93	89	85	81	83	80	76	73	62	60	58	47	45	44	32	31	31	24				
2	85	77	71	66	75	69	64	60	55	51	48	41	39	37	28	27	26	20				
3	77	68	61	55	69	61	55	50	48	44	41	36	33	31	25	23	22	17				
4	71	60	53	47	63	54	48	43	43	38	34	32	29	27	22	21	19	15				
5	65	53	46	40	58	48	41	36	38	33	30	29	26	23	20	18	17	13				
6	59	48	40	34	53	43	36	32	34	29	26	26	23	20	18	16	15	11				
7	55	43	35	30	49	39	32	28	31	26	23	24	20	18	17	15	13	10				
8	51	39	32	26	45	35	29	24	28	23	20	22	18	16	15	13	12	9				
9	47	35	28	23	42	32	26	21	26	21	18	20	16	14	14	12	10	8				
10	44	32	25	21	39	29	23	19	24	19	16	18	15	13	13	11	9	7				

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

	0°	45°	90°
0°	12936	12936	12936
5°	12692	11423	11067
10°	12525	10162	9561
15°	12341	9100	8363
20°	12059	8164	7315
25°	11683	7290	6373
30°	11313	6442	5532
35°	10811	5665	4749
40°	10344	4960	4025
45°	9803	4263	3359
50°	9231	3611	2756
55°	8626	3038	2222
60°	8048	2490	1777
65°	7335	1985	1406
70°	6649	1556	1111
75°	5815	1195	876
80°	4862	889	682
85°	3539	646	519

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 9803 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	75.6	1.1
10°-20°	214.6	3.0
20°-30°	316.8	4.5
30°-40°	364.2	5.2
40°-50°	353.3	5.0
50°-60°	295.8	4.2
60°-70°	213.1	3.0
70°-80°	130.2	1.8
80°-90°	65.4	0.9
90°-100°	139.5	2.0
100°-110°	824.8	11.7
110°-120°	1110.6	15.7
120°-130°	902.6	12.8
130°-140°	725.1	10.3
140°-150°	571.5	8.1
150°-160°	417.9	5.9
160°-170°	259.6	3.7
170°-180°	88.5	1.3
0°-30°	607.0	8.6
0°-40°	971.2	13.7
0°-60°	1620.3	22.9
0°-90°	2028.9	28.7
90°-120°	2074.9	29.4
90°-150°	4274.1	60.5
90°-180°	5040.0	71.3
0°-180°	7069.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	801	801	801	801	801	
5°	789	803	796	797	802	75
15°	755	766	759	763	768	212
25°	681	692	690	687	691	314
35°	580	589	584	578	578	364
45°	465	470	462	448	441	358
55°	343	347	335	314	304	307
65°	226	227	216	200	195	225
75°	122	122	124	121	119	131
85°	37	45	62	67	67	39
90°	3	28	52	65	66	6
95°	58	97	71	85	97	62
105°	193	284	1066	1364	908	203
115°	330	394	916	1901	2222	327
125°	467	528	862	1505	1780	415
135°	574	637	867	1240	1423	442
145°	679	736	872	1080	1195	427
155°	796	825	890	979	1025	366
165°	884	896	914	937	954	248
175°	931	937	931	925	919	88
180°	931	931	931	931	931	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	801.2	801.2	801.2	801.2	801.2
2.5°	794.0	805.5	798.5	800.3	801.2
5°	788.8	803.2	795.6	796.8	802.3
7.5°	781.5	794.8	788.1	789.6	796.0
10°	775.2	788.5	780.8	783.2	788.8
12.5°	767.0	779.4	773.6	776.0	781.5
15°	754.8	765.9	759.3	762.9	768.4
17.5°	736.7	748.7	741.7	743.6	749.2
20°	723.1	734.2	729.9	730.0	735.6
22.5°	706.8	718.8	715.4	712.9	719.3
25°	681.3	692.3	690.3	687.0	691.4
27.5°	655.9	664.1	660.2	656.9	660.2
30°	636.0	646.0	639.4	636.1	639.4
32.5°	614.3	624.2	617.7	613.4	614.9
35°	580.5	589.4	583.9	578.3	578.3
37.5°	548.6	554.4	550.7	541.1	538.7
40°	525.1	531.7	526.2	514.8	511.5
42.5°	500.6	507.3	500.9	488.5	483.4
45°	465.1	469.5	461.7	448.0	441.3
47.5°	428.4	433.1	422.3	407.2	399.3
50°	404.0	409.5	396.1	380.0	371.2
52.5°	380.5	384.2	371.6	352.9	344.9
55°	342.9	347.3	335.0	314.4	304.4
57.5°	307.8	312.0	297.4	277.8	270.0
60°	285.2	288.5	273.9	253.3	245.6
62.5°	259.8	263.1	249.4	231.6	223.8
65°	226.3	227.4	216.1	200.2	194.6
67.5°	194.9	194.9	185.4	173.5	169.1
70°	173.1	173.1	166.4	157.2	152.8
72.5°	153.2	152.3	148.2	141.8	138.3
75°	122.2	122.2	124.5	121.0	118.8
77.5°	95.1	93.3	103.0	102.5	101.4
80°	77.0	77.0	89.4	91.6	90.5
82.5°	60.7	62.4	78.5	81.7	80.6
85°	37.3	45.1	62.2	66.8	66.8
87.5°	17.0	31.6	51.2	58.3	58.5
90°	3.4	27.9	52.5	65.1	66.2
92.5°	21.1	36.8	59.3	76.7	83.3
95°	58.2	97.1	70.6	84.7	97.2
97.5°	96.7	173.5	361.5	125.4	113.0
100°	124.8	214.4	704.6	222.7	156.2
102.5°	152.0	246.2	944.5	552.4	310.9
105°	192.8	283.5	1065.5	1364.2	908.4
107.5°	233.6	300.5	1015.0	1976.9	1853.2
110°	260.8	324.0	986.0	2075.1	2230.8



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	289.0	352.1	957.9	2014.8	2275.9
115°	330.0	394.3	915.8	1900.9	2221.6
117.5°	372.0	436.4	905.0	1776.8	2106.6
120°	403.8	464.6	885.3	1682.5	2026.1
122.5°	427.3	491.7	861.9	1602.3	1918.3
125°	467.1	527.9	861.9	1505.3	1780.1
127.5°	499.7	563.0	863.1	1392.8	1664.2
130°	517.6	586.3	867.8	1317.5	1575.2
132.5°	539.2	607.9	866.9	1283.7	1495.5
135°	573.9	636.8	866.6	1239.7	1422.9
137.5°	603.1	670.7	866.6	1191.1	1348.0
140°	626.6	689.5	866.6	1162.7	1305.8
142.5°	650.0	708.4	871.3	1129.7	1263.7
145°	679.3	736.5	872.5	1080.1	1194.6
147.5°	714.4	764.8	879.5	1044.3	1132.5
150°	737.8	783.6	884.2	1020.6	1095.0
152.5°	761.2	802.5	884.2	1001.5	1062.2
155°	796.4	825.0	890.1	978.9	1024.7
157.5°	824.5	852.0	897.1	964.6	997.8
160°	843.2	866.1	901.8	955.1	983.8
162.5°	857.3	880.2	906.5	950.2	969.7
165°	884.2	895.7	913.5	937.3	954.5
167.5°	899.4	909.7	919.3	931.3	941.6
170°	913.5	919.2	919.3	931.2	936.9
172.5°	918.2	928.5	924.0	926.5	932.2
175°	931.1	936.8	931.1	925.1	919.3
177.5°	931.1	935.6	931.1	931.0	926.4
180°	931.1	931.1	931.1	931.1	931.1

(END OF REPORT)