

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: P644354

Luminaire Tested: CRQ4DIP-SR4F0-50D25U835-FLLOOB-1DUDD-WW

Issue Date: 2/20/2023



Test Information

Test Method: LM-79-2019
Report Number: P644354
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-SR4F0-50D25U835-FLLOOB-1DUDD-WW
Description: NEO-RAY CIRQUE SUSPENDED LED LUMINAIRE
DOWNLIGHT - CURVED FROSTED LENS - 500 LUMENS PER FOOT
UPLIGHT - BATWING OPTIC - 250 LUMENS PER FOOT
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

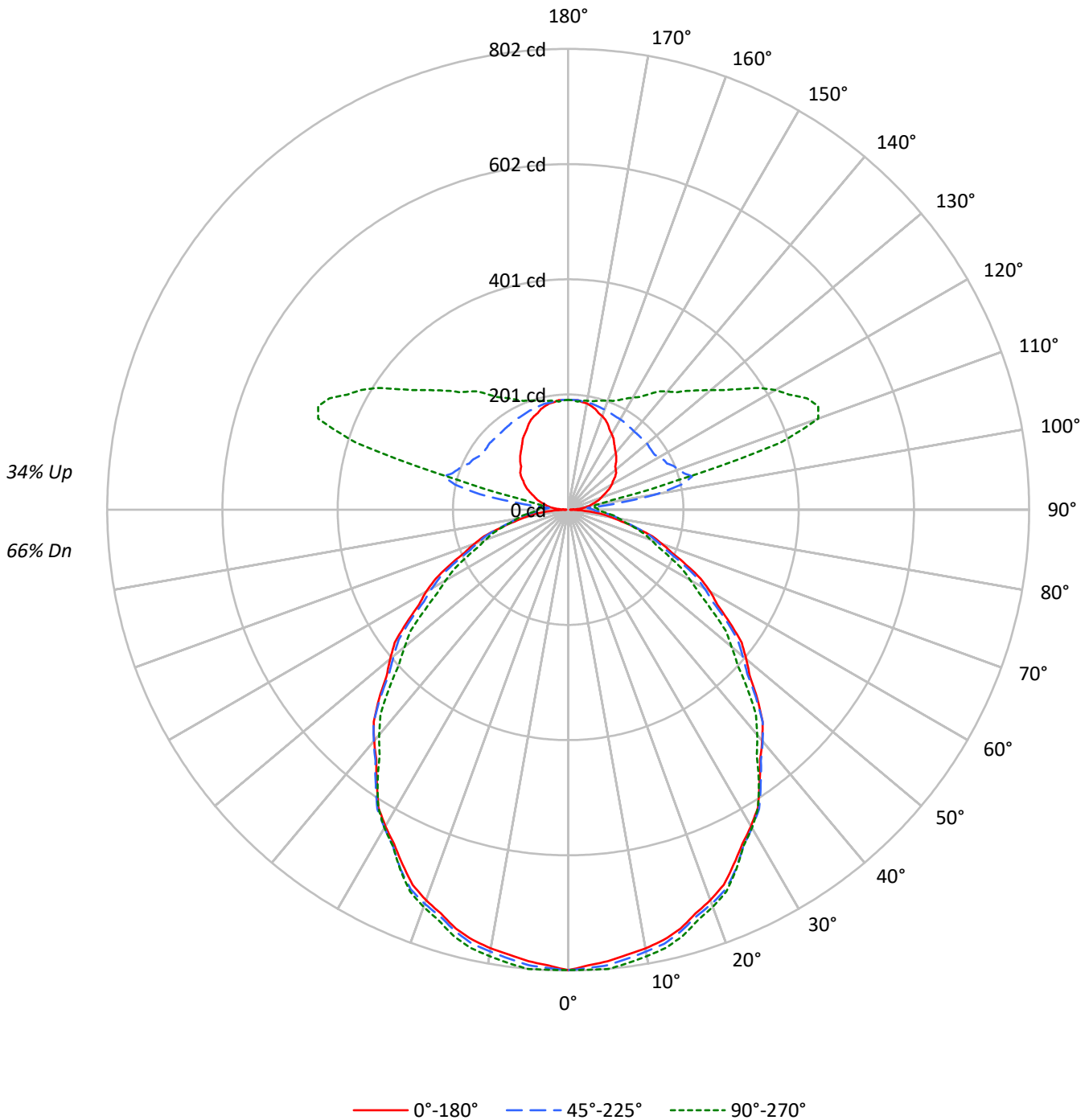
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3093.6 lumens
Efficiency: N/A
Efficacy: 136.9 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-Direct

Input Watts (W): 22.6
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: P644354
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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	111	111	111	111	104	104	104	104	92	92	92	81	81	81	70	70	70	66																				
1	101	96	92	89	95	91	87	84	80	78	75	71	69	67	62	60	59	55																				
2	92	84	78	73	86	80	74	69	71	66	62	62	59	56	55	52	50	46																				
3	84	74	67	61	79	70	63	58	62	57	53	55	51	47	48	45	43	39																				
4	77	66	58	52	72	62	55	49	56	50	45	49	45	41	43	40	37	34																				
5	71	59	51	44	66	56	48	43	50	44	39	44	39	36	39	35	32	29																				
6	65	53	45	39	61	50	43	37	45	39	34	40	35	31	36	32	28	26																				
7	61	48	40	34	57	46	38	33	41	35	30	37	32	28	33	29	25	23																				
8	56	44	36	30	53	42	34	29	37	31	27	34	29	25	30	26	23	21																				
9	53	40	32	27	49	38	31	26	34	29	24	31	26	22	28	24	21	19																				
10	49	37	29	25	46	35	28	24	32	26	22	29	24	20	26	22	19	17																				

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	2.4
10°-20°	214.6	6.9
20°-30°	316.8	10.2
30°-40°	364.2	11.8
40°-50°	353.3	11.4
50°-60°	295.8	9.6
60°-70°	213.1	6.9
70°-80°	130.2	4.2
80°-90°	63.7	2.1
90°-100°	48.6	1.6
100°-110°	176.7	5.7
110°-120°	230.7	7.5
120°-130°	186.5	6.0
130°-140°	149.1	4.8
140°-150°	117.4	3.8
150°-160°	85.9	2.8
160°-170°	53.3	1.7
170°-180°	18.2	0.6
0°-30°	607.0	19.6
0°-40°	971.2	31.4
0°-60°	1620.3	52.4
0°-90°	2027.2	65.5
90°-120°	456.0	14.7
90°-150°	909.0	29.4
90°-180°	1066.0	34.5
0°-180°	3093.6	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	23	43	51	52	5
95°	21	28	33	43	46	20
105°	49	62	223	288	196	51
115°	74	84	190	392	458	73
125°	100	110	178	309	366	88
135°	118	131	178	255	292	91
145°	140	151	179	222	245	88
155°	164	170	183	201	211	75
165°	182	184	188	193	196	51
175°	191	192	191	190	189	18
180°	191	191	191	191	191	

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CATALOG NUMBER: CRQ4DIP-SR4F0-50D25U835-FLLOOB-1DUDD-WW

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	30.7	49.4	55.5	55.7
90°	3.4	23.4	43.1	51.2	52.3
92.5°	9.9	21.0	38.8	47.8	50.7
95°	20.9	28.1	33.4	42.6	46.1
97.5°	30.7	41.0	87.9	44.7	43.2
100°	36.4	48.7	155.6	61.1	49.2
102.5°	41.3	54.5	202.0	125.9	77.4
105°	48.6	62.0	223.4	288.4	196.5
107.5°	55.9	64.6	211.1	411.2	386.7
110°	60.8	69.4	204.4	430.0	462.9



TEST NUMBER: P644354

CATALOG NUMBER: CRQ4DIP-SR4F0-50D25U835-FLLOOB-1DUDD-WW

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	66.6	75.1	198.6	416.2	470.7
115°	74.1	83.8	190.0	392.4	458.3
117.5°	81.6	92.4	187.6	365.8	433.6
120°	87.5	98.2	182.8	345.7	416.3
122.5°	92.3	103.1	178.0	329.2	394.2
125°	99.6	110.3	178.0	309.3	365.8
127.5°	105.2	117.5	178.2	286.2	341.9
130°	108.1	122.3	179.2	270.7	323.7
132.5°	111.1	125.3	178.3	263.8	307.3
135°	117.9	130.9	178.1	254.7	292.4
137.5°	123.9	137.8	178.1	244.7	277.0
140°	128.7	141.7	178.1	238.9	268.3
142.5°	133.6	145.6	179.0	232.1	259.6
145°	139.6	151.3	179.3	221.9	245.4
147.5°	146.8	157.1	180.7	214.6	232.7
150°	151.6	161.0	181.7	209.7	225.0
152.5°	156.4	164.9	181.7	205.8	218.3
155°	163.6	169.5	182.9	201.1	210.6
157.5°	169.4	175.1	184.3	198.2	205.0
160°	173.3	178.0	185.3	196.2	202.1
162.5°	176.1	180.8	186.3	195.2	199.2
165°	181.7	184.0	187.7	192.6	196.1
167.5°	184.8	186.9	188.9	191.4	193.5
170°	187.7	188.9	188.9	191.3	192.5
172.5°	188.7	190.8	189.9	190.4	191.5
175°	191.3	192.5	191.3	190.1	188.9
177.5°	191.3	192.2	191.3	191.3	190.3
180°	191.3	191.3	191.3	191.3	191.3

(END OF REPORT)