

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: P644364

Luminaire Tested: CRQ4DIP-SR4F0-50D50U830-FLLOOB-1DUDD-WW

Issue Date: 2/20/2023



Test Information

Test Method: LM-79-2019
Report Number: P644364
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-SR4F0-50D50U830-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: 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

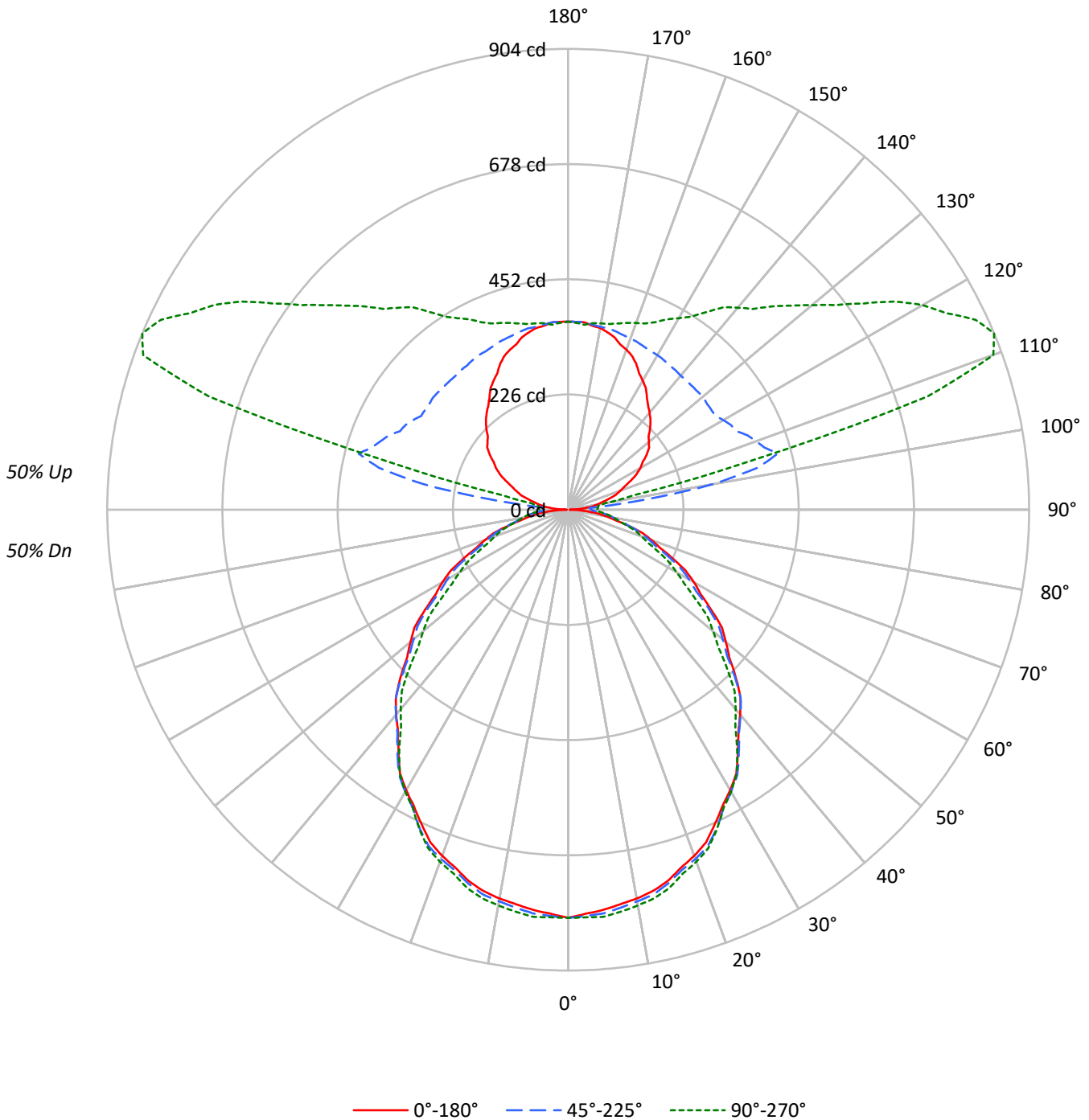
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4046.0 lumens
Efficiency: N/A
Efficacy: 140.0 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: General Diffuse

Input Watts (W): 28.9
Input Voltage (V): 120
Input Current (A_{in}): 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	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°	12925	12925	12925
5°	12681	11411	11057
10°	12514	10153	9552
15°	12330	9093	8355
20°	12049	8157	7308
25°	11671	7284	6368
30°	11302	6436	5527
35°	10802	5660	4744
40°	10334	4955	4021
45°	9795	4259	3356
50°	9222	3607	2753
55°	8618	3035	2220
60°	8039	2488	1774
65°	7328	1984	1405
70°	6645	1554	1109
75°	5810	1194	875
80°	4855	888	682
85°	3539	646	518

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 9795 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	75.6	1.9
10°-20°	214.4	5.3
20°-30°	316.5	7.8
30°-40°	363.9	9.0
40°-50°	353.0	8.7
50°-60°	295.5	7.3
60°-70°	212.9	5.3
70°-80°	130.1	3.2
80°-90°	64.0	1.6
90°-100°	70.4	1.7
100°-110°	332.2	8.2
110°-120°	441.9	10.9
120°-130°	358.4	8.9
130°-140°	287.4	7.1
140°-150°	226.4	5.6
150°-160°	165.6	4.1
160°-170°	102.8	2.5
170°-180°	35.1	0.9
0°-30°	606.5	15.0
0°-40°	970.4	24.0
0°-60°	1618.8	40.0
0°-90°	2025.8	50.1
90°-120°	844.5	20.9
90°-150°	1716.7	42.4
90°-180°	2020.0	49.9
0°-180°	4046.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	800	800	800	800	800	
5°	788	802	795	796	802	75
15°	754	765	759	762	768	212
25°	681	692	690	686	691	314
35°	580	589	583	578	578	363
45°	465	469	461	448	441	358
55°	343	347	335	314	304	307
65°	226	227	216	200	194	225
75°	122	122	124	121	119	131
85°	37	45	62	67	67	39
90°	3	24	45	54	56	5
95°	30	45	42	53	58	30
105°	83	115	426	547	367	88
115°	136	158	364	754	882	134
125°	188	210	342	596	705	167
135°	227	252	343	491	564	175
145°	269	292	346	428	473	169
155°	316	327	353	388	406	145
165°	350	355	362	371	378	98
175°	369	371	369	366	364	35
180°	369	369	369	369	369	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	800.5	800.5	800.5	800.5	800.5
2.5°	793.3	804.8	797.8	799.6	800.5
5°	788.1	802.4	794.8	796.1	801.6
7.5°	780.8	794.1	787.4	788.9	795.3
10°	774.5	787.8	780.1	782.5	788.1
12.5°	766.3	778.7	772.9	775.3	780.8
15°	754.1	765.2	758.7	762.2	767.7
17.5°	736.0	748.0	741.0	743.0	748.5
20°	722.5	733.5	729.3	729.4	734.9
22.5°	706.2	718.1	714.8	712.2	718.6
25°	680.6	691.7	689.7	686.4	690.8
27.5°	655.3	663.5	659.6	656.3	659.6
30°	635.4	645.4	638.8	635.5	638.8
32.5°	613.7	623.7	617.1	612.8	614.4
35°	580.0	588.9	583.4	577.8	577.8
37.5°	548.1	553.9	550.2	540.6	538.2
40°	524.6	531.3	525.7	514.4	511.0
42.5°	500.2	506.8	500.4	488.1	483.0
45°	464.7	469.1	461.3	447.6	440.9
47.5°	428.1	432.7	422.0	406.8	398.9
50°	403.6	409.2	395.7	379.7	370.9
52.5°	380.1	383.9	371.3	352.6	344.6
55°	342.6	347.0	334.7	314.1	304.1
57.5°	307.5	311.7	297.1	277.5	269.8
60°	284.9	288.2	273.6	253.1	245.3
62.5°	259.6	262.9	249.2	231.4	223.6
65°	226.1	227.2	216.0	200.0	194.5
67.5°	194.7	194.7	185.2	173.3	168.9
70°	173.0	173.0	166.2	157.1	152.6
72.5°	153.1	152.2	148.1	141.7	138.2
75°	122.1	122.1	124.4	120.9	118.7
77.5°	95.0	93.2	102.9	102.4	101.3
80°	76.9	76.9	89.3	91.6	90.5
82.5°	60.6	62.4	78.5	81.6	80.5
85°	37.3	45.0	62.2	66.7	66.7
87.5°	17.0	30.9	49.8	56.1	56.3
90°	3.4	24.5	45.3	54.5	55.6
92.5°	12.6	24.8	43.7	54.7	58.5
95°	29.9	44.6	42.3	52.7	58.3
97.5°	46.5	72.8	153.6	64.0	59.9
100°	57.6	88.5	287.3	99.8	74.8
102.5°	67.9	100.5	380.2	228.3	133.4
105°	83.2	115.2	425.6	546.6	367.4
107.5°	98.6	121.2	404.0	787.0	738.7
110°	108.8	130.5	392.0	824.9	887.2



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	119.9	141.6	380.9	799.9	904.0
115°	135.5	158.3	364.2	754.5	881.5
117.5°	151.3	175.0	359.8	704.5	835.1
120°	163.4	186.1	351.4	666.6	802.7
122.5°	172.7	196.4	342.2	634.8	760.0
125°	187.8	210.5	342.2	596.4	705.2
127.5°	199.9	224.4	342.6	551.8	659.3
130°	206.4	233.6	344.5	522.0	624.1
132.5°	213.9	241.1	343.6	508.6	592.5
135°	227.3	252.3	343.3	491.1	563.7
137.5°	238.9	265.7	343.3	471.9	534.0
140°	248.2	273.2	343.3	460.6	517.3
142.5°	257.5	280.6	345.2	447.6	500.6
145°	269.1	291.8	345.7	427.9	473.3
147.5°	283.0	303.0	348.4	413.7	448.7
150°	292.3	310.5	350.3	404.3	433.8
152.5°	301.6	317.9	350.3	396.8	420.8
155°	315.5	326.8	352.6	387.8	406.0
157.5°	326.6	337.5	355.4	382.2	395.3
160°	334.1	343.1	357.3	378.4	389.7
162.5°	339.6	348.7	359.1	376.5	384.2
165°	350.3	354.8	361.9	371.3	378.1
167.5°	356.3	360.4	364.2	369.0	373.0
170°	361.9	364.2	364.2	368.9	371.2
172.5°	363.8	367.8	366.1	367.1	369.3
175°	368.9	371.1	368.9	366.5	364.2
177.5°	368.9	370.7	368.9	368.8	367.0
180°	368.9	368.9	368.9	368.9	368.9

(END OF REPORT)