

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: P644374

Luminaire Tested: CRQ4DIP-SR4F0-50D50U940-FLLOOB-1DUDD-WW

Issue Date: 2/20/2023



Test Information

Test Method: LM-79-2019
Report Number: P644374
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-SR4F0-50D50U940-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, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

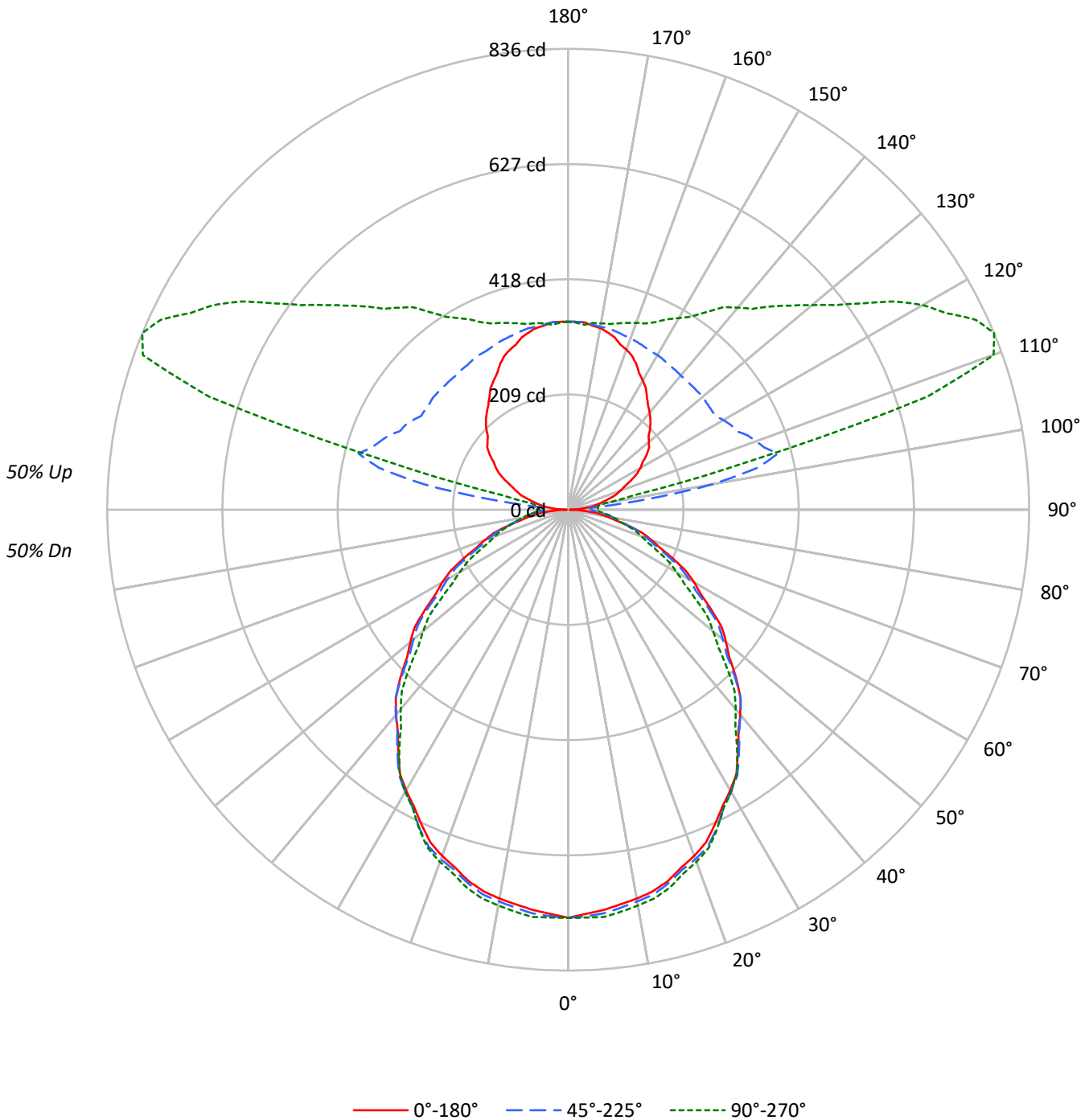
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3742.5 lumens
Efficiency: N/A
Efficacy: 129.5 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°	11956	11956	11956
5°	11730	10555	10228
10°	11575	9391	8836
15°	11406	8411	7728
20°	11145	7545	6760
25°	10797	6738	5890
30°	10456	5953	5113
35°	9992	5236	4388
40°	9560	4584	3720
45°	9059	3940	3105
50°	8532	3336	2546
55°	7972	2808	2053
60°	7438	2301	1641
65°	6781	1835	1299
70°	6146	1438	1026
75°	5377	1104	809
80°	4489	821	631
85°	3273	597	479

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 9059 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	69.9	1.9
10°-20°	198.3	5.3
20°-30°	292.8	7.8
30°-40°	336.6	9.0
40°-50°	326.5	8.7
50°-60°	273.3	7.3
60°-70°	196.9	5.3
70°-80°	120.3	3.2
80°-90°	59.2	1.6
90°-100°	65.1	1.7
100°-110°	307.3	8.2
110°-120°	408.8	10.9
120°-130°	331.5	8.9
130°-140°	265.8	7.1
140°-150°	209.4	5.6
150°-160°	153.1	4.1
160°-170°	95.1	2.5
170°-180°	32.4	0.9
0°-30°	561.0	15.0
0°-40°	897.6	24.0
0°-60°	1497.4	40.0
0°-90°	1873.9	50.1
90°-120°	781.1	20.9
90°-150°	1587.9	42.4
90°-180°	1869.0	49.9
0°-180°	3742.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	740	740	740	740	740	
5°	729	742	735	736	742	69
15°	698	708	702	705	710	196
25°	630	640	638	635	639	290
35°	536	545	540	534	534	336
45°	430	434	427	414	408	331
55°	317	321	310	290	281	284
65°	209	210	200	185	180	208
75°	113	113	115	112	110	121
85°	34	42	58	62	62	36
90°	3	23	42	50	51	5
95°	28	41	39	49	54	28
105°	77	106	394	506	340	81
115°	125	146	337	698	815	124
125°	174	195	316	552	652	154
135°	210	233	318	454	522	162
145°	249	270	320	396	438	156
155°	292	302	326	359	376	134
165°	324	328	335	344	350	91
175°	341	343	341	339	337	32
180°	341	341	341	341	341	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	740.5	740.5	740.5	740.5	740.5
2.5°	733.8	744.4	737.9	739.6	740.5
5°	729.0	742.2	735.2	736.4	741.5
7.5°	722.3	734.5	728.3	729.7	735.6
10°	716.4	728.7	721.6	723.8	729.0
12.5°	708.9	720.3	714.9	717.1	722.3
15°	697.6	707.8	701.8	705.0	710.1
17.5°	680.8	691.9	685.4	687.2	692.4
20°	668.3	678.5	674.6	674.7	679.8
22.5°	653.2	664.3	661.2	658.8	664.7
25°	629.6	639.8	638.0	634.9	639.0
27.5°	606.2	613.7	610.1	607.1	610.1
30°	587.8	597.0	590.9	587.8	590.9
32.5°	567.7	576.9	570.8	566.9	568.3
35°	536.5	544.7	539.7	534.4	534.4
37.5°	507.0	512.3	508.9	500.1	497.8
40°	485.3	491.4	486.3	475.8	472.7
42.5°	462.7	468.8	462.9	451.5	446.8
45°	429.8	433.9	426.7	414.0	407.9
47.5°	396.0	400.3	390.3	376.3	369.0
50°	373.4	378.5	366.0	351.2	343.0
52.5°	351.6	355.1	343.5	326.1	318.8
55°	316.9	321.0	309.6	290.5	281.3
57.5°	284.5	288.4	274.8	256.7	249.5
60°	263.6	266.6	253.1	234.1	226.9
62.5°	240.1	243.2	230.5	214.0	206.9
65°	209.2	210.2	199.8	185.0	179.9
67.5°	180.1	180.1	171.3	160.3	156.2
70°	160.0	160.0	153.7	145.3	141.2
72.5°	141.6	140.8	137.0	131.1	127.8
75°	113.0	113.0	115.0	111.9	109.8
77.5°	87.9	86.2	95.2	94.7	93.7
80°	71.1	71.1	82.6	84.7	83.7
82.5°	56.1	57.7	72.6	75.5	74.5
85°	34.5	41.7	57.5	61.7	61.7
87.5°	15.7	28.6	46.0	51.9	52.1
90°	3.1	22.6	41.9	50.4	51.4
92.5°	11.6	22.9	40.4	50.6	54.1
95°	27.6	41.3	39.1	48.7	53.9
97.5°	43.0	67.3	142.1	59.2	55.4
100°	53.3	81.8	265.8	92.4	69.2
102.5°	62.8	93.0	351.7	211.1	123.4
105°	77.0	106.5	393.6	505.6	339.8
107.5°	91.2	112.1	373.7	728.0	683.3
110°	100.6	120.7	362.6	763.0	820.7



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	110.9	131.0	352.3	739.9	836.2
115°	125.3	146.4	336.9	697.9	815.4
117.5°	140.0	161.9	332.8	651.6	772.5
120°	151.2	172.2	325.1	616.6	742.5
122.5°	159.7	181.6	316.5	587.2	703.0
125°	173.7	194.7	316.5	551.6	652.4
127.5°	184.9	207.6	316.9	510.4	609.9
130°	190.9	216.1	318.6	482.8	577.2
132.5°	197.8	223.0	317.8	470.4	548.1
135°	210.3	233.4	317.6	454.3	521.5
137.5°	221.0	245.8	317.6	436.5	494.0
140°	229.6	252.7	317.6	426.1	478.5
142.5°	238.2	259.6	319.3	414.0	463.1
145°	248.9	269.9	319.7	395.8	437.8
147.5°	261.8	280.3	322.3	382.7	415.0
150°	270.4	287.2	324.0	374.0	401.3
152.5°	279.0	294.1	324.0	367.0	389.3
155°	291.8	302.3	326.2	358.7	375.5
157.5°	302.1	312.2	328.8	353.5	365.7
160°	309.0	317.4	330.5	350.0	360.5
162.5°	314.2	322.6	332.2	348.2	355.4
165°	324.0	328.2	334.8	343.5	349.8
167.5°	329.6	333.4	336.9	341.3	345.1
170°	334.8	336.9	336.9	341.2	343.3
172.5°	336.5	340.3	338.6	339.5	341.6
175°	341.2	343.3	341.2	339.0	336.9
177.5°	341.2	342.9	341.2	341.2	339.5
180°	341.2	341.2	341.2	341.2	341.2

(END OF REPORT)