

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: P644372

Luminaire Tested: CRQ4DIP-SR4F0-50D50U935-FLLOOB-1DUDD-WW

Issue Date: 2/20/2023



Test Information

Test Method: LM-79-2019
Report Number: P644372
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-SR4F0-50D50U935-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: 3500K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

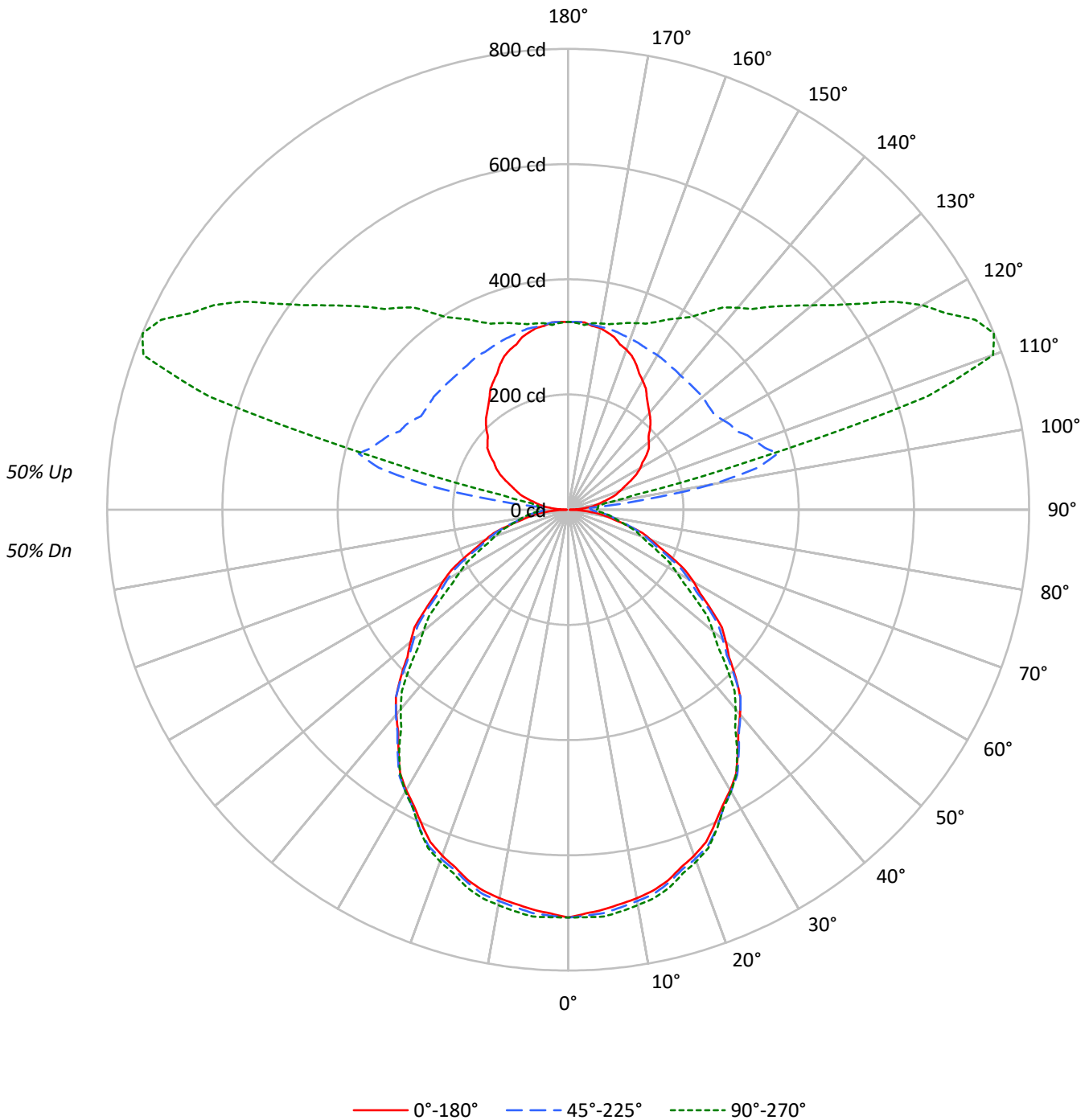
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3578.4 lumens
Efficiency: N/A
Efficacy: 123.8 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										
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°	11431	11431	11431
5°	11215	10093	9780
10°	11068	8980	8448
15°	10906	8042	7390
20°	10656	7214	6463
25°	10323	6442	5632
30°	9997	5692	4889
35°	9554	5006	4196
40°	9141	4383	3557
45°	8663	3767	2968
50°	8157	3190	2435
55°	7622	2684	1964
60°	7111	2200	1570
65°	6482	1754	1242
70°	5877	1375	981
75°	5139	1056	774
80°	4294	785	603
85°	3131	571	458

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 8663 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	66.8	1.9
10°-20°	189.6	5.3
20°-30°	279.9	7.8
30°-40°	321.8	9.0
40°-50°	312.2	8.7
50°-60°	261.3	7.3
60°-70°	188.3	5.3
70°-80°	115.0	3.2
80°-90°	56.6	1.6
90°-100°	62.2	1.7
100°-110°	293.8	8.2
110°-120°	390.8	10.9
120°-130°	317.0	8.9
130°-140°	254.2	7.1
140°-150°	200.3	5.6
150°-160°	146.4	4.1
160°-170°	90.9	2.5
170°-180°	31.0	0.9
0°-30°	536.4	15.0
0°-40°	858.2	24.0
0°-60°	1431.8	40.0
0°-90°	1791.7	50.1
90°-120°	746.9	20.9
90°-150°	1518.3	42.4
90°-180°	1787.0	49.9
0°-180°	3578.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	708	708	708	708	708	
5°	697	710	703	704	709	66
15°	667	677	671	674	679	188
25°	602	612	610	607	611	277
35°	513	521	516	511	511	321
45°	411	415	408	396	390	317
55°	303	307	296	278	269	272
65°	200	201	191	177	172	199
75°	108	108	110	107	105	115
85°	33	40	55	59	59	35
90°	3	22	40	48	49	4
95°	26	40	37	47	52	27
105°	74	102	376	484	325	78
115°	120	140	322	667	780	119
125°	166	186	303	528	624	147
135°	201	223	304	434	499	155
145°	238	258	306	378	419	149
155°	279	289	312	343	359	128
165°	310	314	320	328	334	87
175°	326	328	326	324	322	31
180°	326	326	326	326	326	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	708.0	708.0	708.0	708.0	708.0
2.5°	701.6	711.8	705.6	707.2	708.0
5°	697.0	709.7	703.0	704.1	709.0
7.5°	690.6	702.3	696.4	697.7	703.4
10°	685.0	696.7	690.0	692.1	697.0
12.5°	677.8	688.7	683.6	685.7	690.6
15°	667.0	676.8	671.0	674.1	679.0
17.5°	651.0	661.6	655.4	657.1	662.0
20°	639.0	648.8	645.0	645.1	650.0
22.5°	624.6	635.2	632.2	629.9	635.6
25°	602.0	611.8	610.0	607.1	611.0
27.5°	579.6	586.8	583.4	580.5	583.4
30°	562.0	570.8	565.0	562.1	565.0
32.5°	542.8	551.6	545.8	542.0	543.4
35°	513.0	520.8	516.0	511.0	511.0
37.5°	484.8	489.9	486.6	478.2	476.0
40°	464.0	469.9	465.0	454.9	452.0
42.5°	442.4	448.3	442.6	431.7	427.2
45°	411.0	414.9	408.0	395.9	390.0
47.5°	378.6	382.7	373.2	359.8	352.8
50°	357.0	361.9	350.0	335.8	328.0
52.5°	336.2	339.5	328.4	311.8	304.8
55°	303.0	306.9	296.0	277.8	269.0
57.5°	272.0	275.7	262.8	245.4	238.6
60°	252.0	254.9	242.0	223.8	217.0
62.5°	229.6	232.5	220.4	204.6	197.8
65°	200.0	201.0	191.0	176.9	172.0
67.5°	172.2	172.2	163.8	153.3	149.4
70°	153.0	153.0	147.0	138.9	135.0
72.5°	135.4	134.6	131.0	125.3	122.2
75°	108.0	108.0	110.0	107.0	105.0
77.5°	84.0	82.4	91.0	90.6	89.6
80°	68.0	68.0	79.0	81.0	80.0
82.5°	53.6	55.2	69.4	72.2	71.2
85°	33.0	39.8	55.0	59.0	59.0
87.5°	15.0	27.3	44.0	49.6	49.8
90°	3.0	21.6	40.1	48.2	49.2
92.5°	11.1	21.9	38.6	48.4	51.8
95°	26.4	39.5	37.4	46.6	51.6
97.5°	41.1	64.4	135.8	56.6	53.0
100°	51.0	78.2	254.1	88.3	66.2
102.5°	60.0	88.9	336.3	201.9	118.0
105°	73.6	101.8	376.4	483.5	324.9
107.5°	87.2	107.2	357.4	696.1	653.3
110°	96.2	115.4	346.7	729.5	784.7



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	106.1	125.3	336.9	707.4	799.5
115°	119.9	140.0	322.1	667.3	779.6
117.5°	133.8	154.8	318.2	623.1	738.6
120°	144.5	164.6	310.8	589.6	709.9
122.5°	152.7	173.7	302.6	561.4	672.2
125°	166.1	186.2	302.6	527.5	623.8
127.5°	176.8	198.5	303.0	488.0	583.1
130°	182.6	206.6	304.7	461.7	551.9
132.5°	189.2	213.2	303.9	449.8	524.0
135°	201.1	223.1	303.7	434.4	498.6
137.5°	211.3	235.0	303.7	417.4	472.3
140°	219.5	241.6	303.7	407.4	457.6
142.5°	227.8	248.2	305.3	395.8	442.8
145°	238.0	258.1	305.7	378.4	418.6
147.5°	250.3	268.0	308.2	365.9	396.8
150°	258.5	274.6	309.8	357.6	383.7
152.5°	266.7	281.2	309.8	350.9	372.2
155°	279.0	289.1	311.9	343.0	359.1
157.5°	288.9	298.5	314.3	338.0	349.6
160°	295.5	303.5	316.0	334.7	344.7
162.5°	300.4	308.4	317.6	333.0	339.8
165°	309.8	313.8	320.1	328.4	334.4
167.5°	315.2	318.8	322.1	326.3	329.9
170°	320.1	322.1	322.1	326.3	328.3
172.5°	321.7	325.3	323.8	324.6	326.7
175°	326.2	328.2	326.2	324.1	322.1
177.5°	326.2	327.8	326.2	326.2	324.6
180°	326.2	326.2	326.2	326.2	326.2

(END OF REPORT)