

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: P644351

Luminaire Tested: CRQ4DIP-SR4F0-50D25U830-FLLFLL-1DUDD-WW

Issue Date: 2/20/2023



Test Information

Test Method: LM-79-2019
Report Number: P644351
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2206-689-28, G2-2206-689-14)
Test Lab: INNOVATION CENTER
Issue Date: 2/20/2023
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: CRQ4DIP-SR4F0-50D25U830-FLLFLL-1DUDD-WW
Description: NEO-RAY CIRQUE SUSPENDED LED LUMINAIRE
DOWNLIGHT - CURVED FROSTED LENS - 500 LUMENS PER FOOT
UPLIGHT - CURVED FROSTED LENS - 250 LUMENS PER FOOT
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

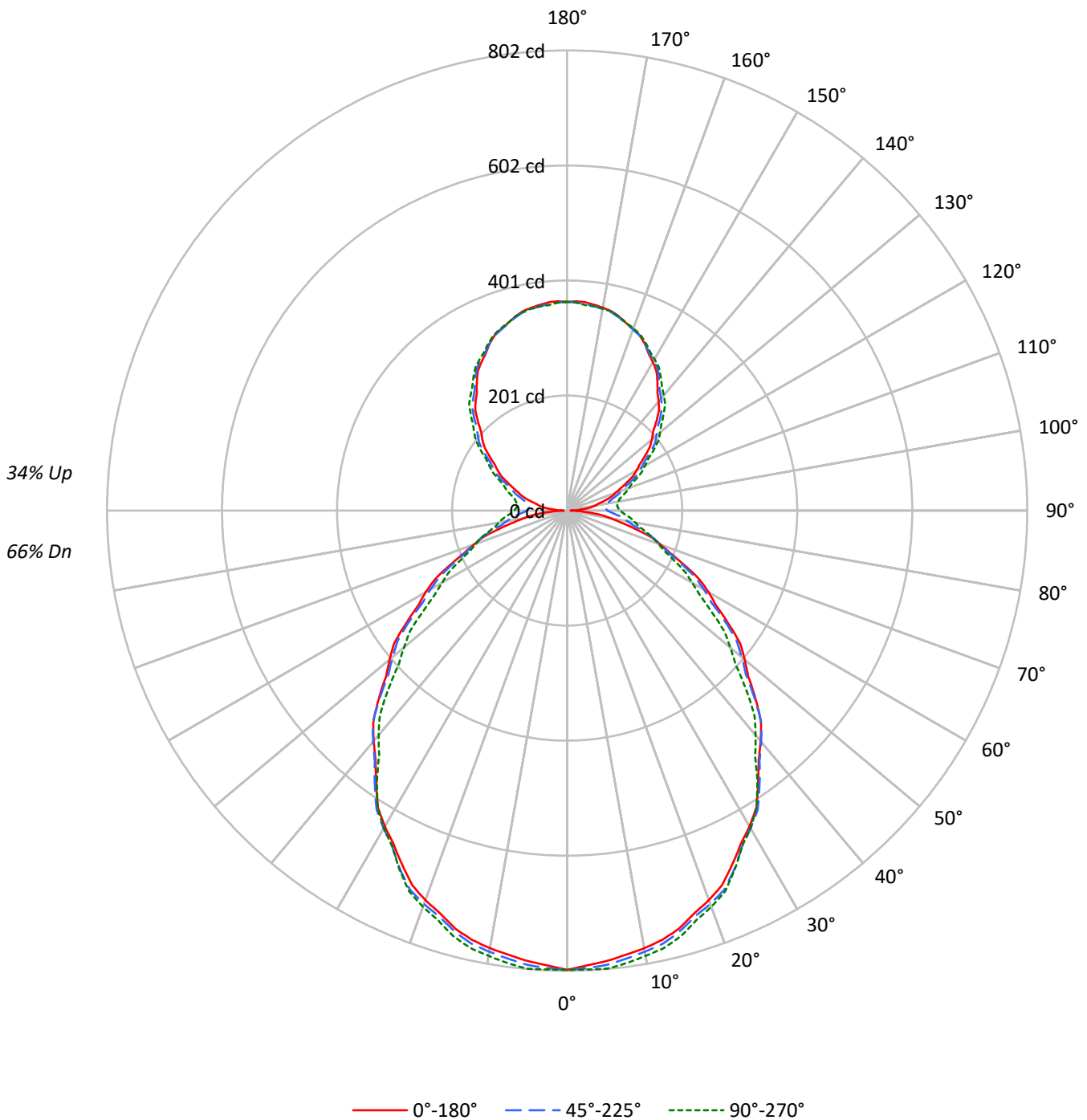
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3137.7 lumens
Efficiency: N/A
Efficacy: 138.8 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: Semi-Direct

Input Watts (W): 22.6
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	0
RCR																		
0	111	111	111	111	104	104	104	104	92	92	92	81	81	81	71	71	71	66
1	101	96	92	88	95	91	87	83	80	77	75	70	68	66	62	60	59	54
2	92	84	77	72	86	79	73	68	70	66	62	62	58	55	54	52	49	45
3	84	74	66	60	78	70	63	57	62	57	52	55	51	47	48	45	42	39
4	77	66	57	51	72	62	55	49	55	49	45	49	44	40	43	39	36	33
5	71	59	50	44	66	55	48	42	50	43	39	44	39	35	39	35	32	29
6	65	53	44	38	61	50	42	37	45	38	34	40	35	31	35	31	28	25
7	60	48	39	34	57	45	38	32	41	34	30	36	31	27	32	28	25	23
8	56	43	35	30	53	41	34	29	37	31	27	33	28	25	30	26	23	20
9	52	40	32	27	49	38	31	26	34	28	24	31	26	22	28	23	20	18
10	49	37	29	24	46	35	28	23	32	26	22	29	24	20	26	22	19	17

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	12925	12925	12925
5°	12681	11411	11057
10°	12514	10158	9552
15°	12330	9096	8355
20°	12049	8161	7308
25°	11671	7284	6368
30°	11302	6444	5527
35°	10802	5672	4744
40°	10334	4959	4021
45°	9795	4263	3356
50°	9222	3618	2753
55°	8618	3042	2240
60°	8039	2502	1819
65°	7328	2019	1483
70°	6645	1616	1228
75°	5810	1302	1043
80°	4855	1061	909
85°	3539	902	818

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	2.4
10°-20°	214.5	6.8
20°-30°	316.6	10.1
30°-40°	364.2	11.6
40°-50°	353.4	11.3
50°-60°	296.8	9.5
60°-70°	218.0	6.9
70°-80°	142.4	4.5
80°-90°	86.8	2.8
90°-100°	68.3	2.2
100°-110°	88.2	2.8
110°-120°	123.1	3.9
120°-130°	157.3	5.0
130°-140°	177.0	5.6
140°-150°	174.8	5.6
150°-160°	147.9	4.7
160°-170°	98.4	3.1
170°-180°	34.4	1.1
0°-30°	606.7	19.3
0°-40°	970.9	30.9
0°-60°	1621.0	51.7
0°-90°	2068.3	65.9
90°-120°	279.6	8.9
90°-150°	788.7	25.1
90°-180°	1069.0	34.1
0°-180°	3137.7	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	766	759	762	768	212
25°	681	692	690	686	691	314
35°	580	590	585	578	578	363
45°	465	470	462	448	441	358
55°	343	348	335	315	307	307
65°	226	230	220	209	205	225
75°	122	125	136	141	142	131
85°	37	54	87	102	105	39
90°	6	35	70	87	92	6
95°	29	36	67	84	88	28
105°	68	67	82	96	100	73
115°	114	116	124	132	134	113
125°	166	170	177	182	184	148
135°	220	225	229	235	238	170
145°	274	278	280	282	284	171
155°	320	322	321	321	323	147
165°	350	351	349	348	350	99
175°	364	366	361	360	360	35
180°	364	364	364	364	364	

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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	798.1	799.6	800.5
5°	788.1	802.4	794.8	796.1	801.6
7.5°	780.8	794.4	787.8	788.9	795.3
10°	774.5	787.8	780.5	782.5	788.1
12.5°	766.3	779.3	773.0	775.3	780.8
15°	754.1	765.9	759.0	762.2	767.7
17.5°	736.0	748.4	741.4	743.0	748.5
20°	722.5	733.9	729.6	729.4	734.9
22.5°	706.2	718.5	715.2	712.2	718.6
25°	680.6	692.5	689.7	686.4	690.8
27.5°	655.3	664.9	660.1	656.3	659.6
30°	635.4	646.1	639.6	635.5	638.8
32.5°	613.7	624.7	617.9	612.8	614.4
35°	580.0	590.0	584.6	577.8	577.8
37.5°	548.1	555.4	550.6	540.6	538.2
40°	524.6	532.8	526.1	514.4	511.0
42.5°	500.2	508.3	501.1	488.1	483.0
45°	464.7	470.2	461.7	447.6	440.9
47.5°	428.1	434.1	422.5	406.8	398.9
50°	403.6	410.3	396.9	379.7	370.9
52.5°	380.1	385.3	372.2	352.9	345.2
55°	342.6	348.5	335.4	315.3	306.8
57.5°	307.5	313.2	298.4	281.0	274.1
60°	284.9	289.7	275.2	258.1	251.5
62.5°	259.6	264.7	251.4	238.0	232.0
65°	226.1	229.5	219.8	208.9	205.3
67.5°	194.7	197.0	190.5	185.1	183.0
70°	173.0	175.3	172.8	170.6	168.9
72.5°	153.1	154.8	156.8	157.7	156.8
75°	122.1	125.1	135.6	140.7	141.5
77.5°	95.0	97.3	117.5	126.3	128.3
80°	76.9	82.2	106.7	118.3	120.6
82.5°	60.6	68.9	98.3	111.7	114.0
85°	37.3	54.1	86.9	101.9	105.3
87.5°	17.5	42.1	76.9	93.3	97.3
90°	6.1	35.1	70.0	87.4	92.2
92.5°	15.0	33.9	67.7	84.8	89.3
95°	28.7	35.5	66.6	84.2	87.6
97.5°	41.0	41.4	69.0	84.9	88.3
100°	48.7	47.4	71.9	86.9	90.6
102.5°	56.4	54.2	75.7	90.0	93.5
105°	68.1	66.7	82.5	96.3	99.7
107.5°	81.1	80.1	92.7	105.0	107.7
110°	89.7	90.2	100.7	111.5	114.5

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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	99.9	100.4	109.7	118.7	121.7
115°	114.1	115.7	124.3	131.6	133.5
117.5°	128.8	131.6	139.2	145.3	147.1
120°	139.6	142.7	149.4	155.2	156.7
122.5°	149.8	152.9	160.2	166.0	167.5
125°	165.5	169.7	176.8	182.3	183.8
127.5°	181.5	186.5	192.9	198.5	200.4
130°	193.0	197.9	203.4	209.3	211.6
132.5°	202.9	207.8	213.3	219.8	222.4
135°	220.0	225.0	229.3	235.2	237.8
137.5°	236.8	241.6	244.9	249.5	252.9
140°	248.2	252.4	254.8	259.1	262.1
142.5°	258.7	262.9	264.7	268.4	271.4
145°	274.5	277.9	279.5	281.5	284.5
147.5°	289.2	292.6	293.2	295.0	296.9
150°	298.8	301.8	301.9	302.7	304.6
152.5°	307.8	310.5	309.6	310.1	312.3
155°	320.4	322.3	320.8	321.2	323.1
157.5°	330.5	332.3	330.0	330.7	332.2
160°	336.6	338.5	335.9	336.3	337.8
162.5°	342.5	343.8	341.4	340.9	343.0
165°	349.8	351.3	348.6	347.5	349.8
167.5°	355.9	357.4	353.9	352.7	355.0
170°	359.0	360.5	356.7	355.2	357.5
172.5°	361.8	363.3	359.2	357.4	359.0
175°	364.4	365.9	361.3	359.8	359.8
177.5°	365.2	366.1	362.7	361.2	363.0
180°	363.7	363.7	363.7	363.7	363.7

(END OF REPORT)