

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: P644369

Luminaire Tested: CRQ4DIP-SR4F0-50D50U930-FLLFLL-1DUDD-WW

Issue Date: 2/20/2023



Test Information

Test Method: LM-79-2019
Report Number: P644369
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-SR4F0-50D50U930-FLLFLL-1DUDD-WW
Description: NEO-RAY CIRQUE SUSPENDED LED LUMINAIRE
DOWNLIGHT - CURVED FROSTED LENS - 500 LUMENS PER FOOT
UPLIGHT - CURVED FROSTED LENS - 500 LUMENS PER FOOT
Light Source: 3000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

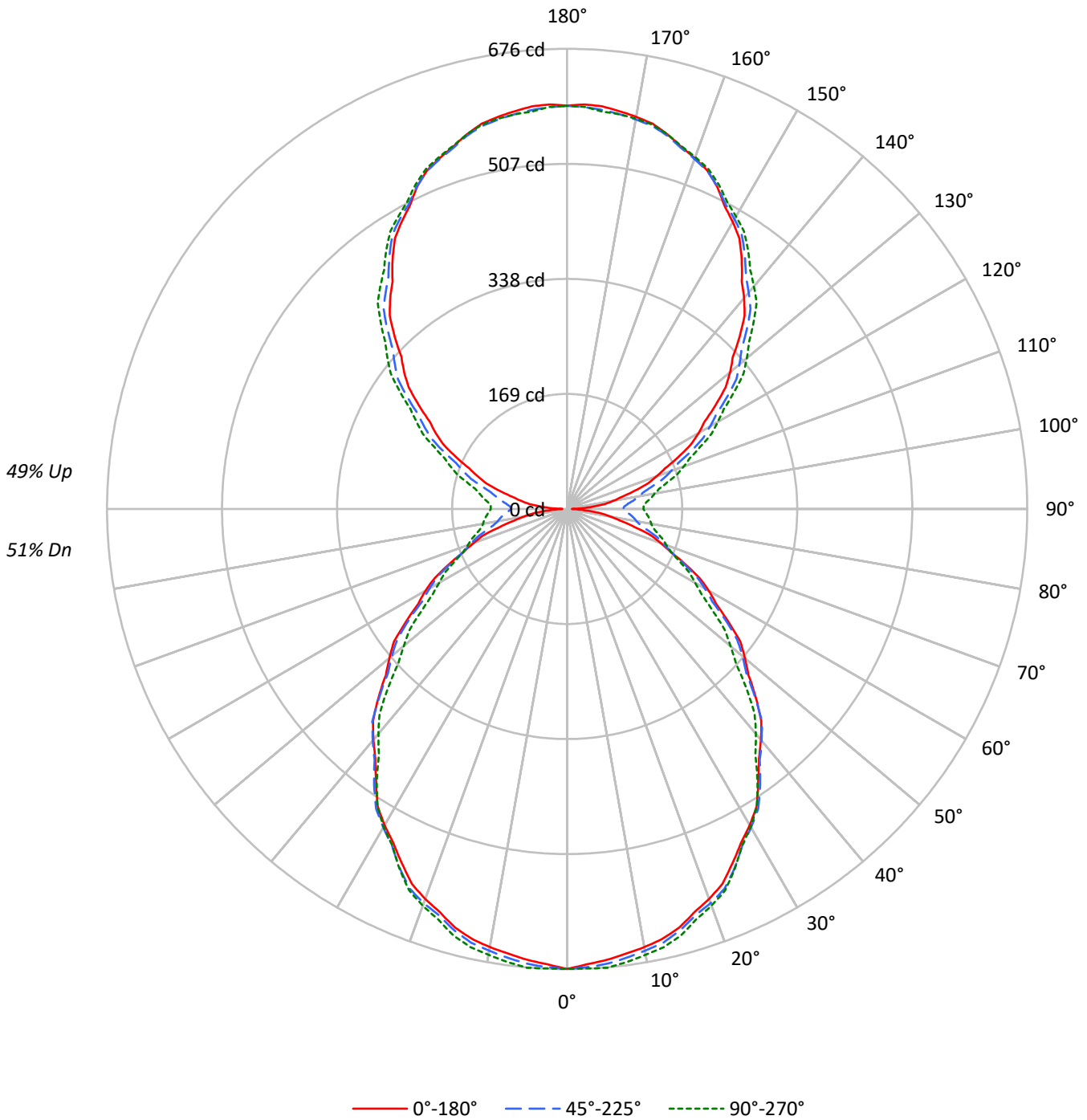
Lumens per Lamp: N/A
Luminaire Lumens: 3490.9 lumens
Efficiency: N/A
Efficacy: 120.8 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.19 / 1.3
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.33')
CIE Type: General Diffuse

Input Watts (W): 28.9
Input Voltage (V): 120
Input Current (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: P644369

CATALOG NUMBER: CRQ4DIP-SR4F0-50D50U930-FLLFLL-1DUDD-WW

Luminous Intensity Polar Plot





TEST NUMBER: P644369

CATALOG NUMBER: CRQ4DIP-SR4F0-50D50U930-FLLFLL-1DUDD-WW

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	84	84	84	70	70	70	57	57	57	51				
1	97	93	89	85	90	86	82	79	73	70	67	60	59	57	49	48	47	42				
2	89	81	74	69	81	75	69	65	63	59	56	53	50	47	43	41	39	35				
3	81	71	64	58	74	66	59	54	56	51	47	47	43	40	38	36	33	29				
4	74	63	55	49	68	58	51	46	50	44	40	42	38	34	34	31	29	25				
5	68	56	48	42	62	52	45	39	45	39	35	38	33	30	31	28	25	22				
6	63	50	42	36	58	47	40	34	40	34	30	34	30	26	28	25	22	19				
7	58	46	37	32	53	42	35	30	37	31	27	31	27	23	26	22	20	17				
8	54	41	34	28	50	39	32	27	33	28	24	28	24	21	24	20	18	15				
9	50	38	30	25	46	35	28	24	31	25	21	26	22	19	22	19	16	14				
10	47	35	27	23	43	32	26	21	28	23	19	24	20	17	20	17	15	13				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10908	10908	10908
5°	10702	9631	9332
10°	10561	8576	8061
15°	10407	7681	7051
20°	10168	6891	6167
25°	9850	6147	5374
30°	9540	5444	4665
35°	9116	4796	4004
40°	8723	4188	3394
45°	8266	3600	2832
50°	7785	3062	2324
55°	7272	2573	1906
60°	6787	2122	1570
65°	6184	1731	1312
70°	5608	1412	1128
75°	4906	1183	1012
80°	4098	1031	945
85°	2989	963	925

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 8266 cd/sqm



TEST NUMBER: P644369

CATALOG NUMBER: CRQ4DIP-SR4F0-50D50U930-FLLFLL-1DUDD-WW

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	63.8	1.8
10°-20°	181.0	5.2
20°-30°	267.3	7.7
30°-40°	307.6	8.8
40°-50°	298.5	8.6
50°-60°	251.5	7.2
60°-70°	188.0	5.4
70°-80°	129.8	3.7
80°-90°	91.8	2.6
90°-100°	91.6	2.6
100°-110°	136.6	3.9
110°-120°	198.0	5.7
120°-130°	255.2	7.3
130°-140°	288.2	8.3
140°-150°	284.7	8.2
150°-160°	240.8	6.9
160°-170°	160.3	4.6
170°-180°	56.1	1.6
0°-30°	512.2	14.7
0°-40°	819.8	23.5
0°-60°	1369.8	39.2
0°-90°	1779.5	51.0
90°-120°	426.2	12.2
90°-150°	1254.2	35.9
90°-180°	1711.0	49.0
0°-180°	3490.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	676	676	676	676	676	
5°	665	677	671	672	676	63
15°	636	647	641	643	648	179
25°	574	585	582	579	583	265
35°	490	499	494	488	488	307
45°	392	398	390	378	372	302
55°	289	295	284	267	261	259
65°	191	196	188	183	182	190
75°	103	108	123	134	137	110
85°	32	53	93	114	119	33
90°	7	40	82	105	112	7
95°	38	50	90	112	117	37
105°	102	105	130	149	153	109
115°	180	186	201	213	216	178
125°	266	275	287	297	299	238
135°	358	366	374	383	387	276
145°	447	453	455	458	463	279
155°	522	525	522	523	526	240
165°	570	572	568	566	570	161
175°	594	596	588	586	586	56
180°	592	592	592	592	592	

TEST NUMBER: P644369

CATALOG NUMBER: CRQ4DIP-SR4F0-50D50U930-FLLFLL-1DUDD-WW

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	675.6	675.6	675.6	675.6	675.6
2.5°	669.5	679.2	673.8	674.8	675.6
5°	665.1	677.2	670.8	671.9	676.5
7.5°	659.0	670.7	665.1	665.8	671.2
10°	653.6	664.8	659.0	660.4	665.1
12.5°	646.8	658.2	652.4	654.3	659.0
15°	636.5	647.0	640.9	643.2	647.9
17.5°	621.2	631.9	626.0	627.0	631.7
20°	609.7	619.7	616.1	615.6	620.2
22.5°	596.0	606.7	603.9	601.1	606.5
25°	574.4	585.0	582.1	579.3	583.0
27.5°	553.1	562.2	557.4	553.9	556.7
30°	536.3	545.9	540.4	536.3	539.1
32.5°	517.9	528.1	522.1	517.2	518.5
35°	489.5	498.8	494.3	487.6	487.6
37.5°	462.6	469.9	464.9	456.3	454.2
40°	442.8	450.8	444.3	434.1	431.3
42.5°	422.1	430.2	423.5	411.9	407.6
45°	392.2	397.8	389.9	377.7	372.1
47.5°	361.3	367.5	357.0	343.4	336.6
50°	340.7	347.2	335.9	320.4	313.0
52.5°	320.8	326.3	314.7	298.1	291.8
55°	289.1	295.3	283.7	267.0	261.1
57.5°	259.5	265.5	252.8	239.9	234.7
60°	240.5	245.7	233.4	221.8	217.1
62.5°	219.1	224.8	213.8	206.0	202.3
65°	190.8	195.5	188.5	183.3	181.7
67.5°	164.3	168.0	165.0	165.4	165.4
70°	146.0	149.7	151.0	154.7	155.2
72.5°	129.2	132.6	139.2	145.7	147.0
75°	103.1	108.0	123.2	134.2	137.3
77.5°	80.2	85.3	110.6	125.4	129.5
80°	64.9	73.5	103.7	120.8	125.4
82.5°	51.1	63.2	98.5	117.9	122.5
85°	31.5	52.8	92.7	113.6	119.2
87.5°	15.2	44.7	87.0	109.1	115.4
90°	7.3	39.7	82.1	105.0	112.1
92.5°	18.9	41.9	84.1	106.4	112.3
95°	37.8	49.8	89.8	112.3	117.0
97.5°	56.1	62.2	98.9	119.6	124.2
100°	68.7	72.6	106.4	126.4	130.7
102.5°	82.0	84.4	115.4	134.4	138.9
105°	102.0	105.0	129.9	148.9	152.6
107.5°	124.2	127.7	148.4	166.0	169.5
110°	139.0	144.2	162.2	178.1	182.1



TEST NUMBER: P644369

CATALOG NUMBER: CRQ4DIP-SR4F0-50D50U930-FLLFLL-1DUDD-WW

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	155.6	160.8	176.8	191.1	195.1
115°	179.6	185.7	200.6	212.6	215.7
117.5°	204.6	211.6	225.1	236.0	238.9
120°	223.0	229.7	242.4	252.8	255.3
122.5°	239.6	247.0	260.0	270.4	272.9
125°	266.0	274.6	287.0	296.8	299.3
127.5°	293.2	301.9	313.3	323.3	326.5
130°	312.5	320.5	330.4	340.9	344.6
132.5°	330.1	338.1	347.3	358.0	362.2
135°	358.4	366.4	373.5	383.0	387.3
137.5°	385.7	393.4	398.9	406.4	411.8
140°	404.3	411.1	415.0	422.0	426.9
142.5°	421.4	428.2	431.1	437.1	442.0
145°	447.1	452.6	455.2	458.5	463.4
147.5°	471.1	476.5	477.6	480.5	483.5
150°	486.7	491.6	491.7	493.0	496.1
152.5°	501.3	505.7	504.3	505.1	508.7
155°	521.9	525.0	522.5	523.2	526.3
157.5°	538.2	541.3	537.5	538.7	541.1
160°	548.3	551.4	547.0	547.7	550.2
162.5°	557.8	559.9	556.1	555.3	558.7
165°	569.7	572.1	567.8	566.0	569.7
167.5°	579.7	582.2	576.5	574.5	578.2
170°	584.8	587.2	581.0	578.6	582.2
172.5°	589.3	591.7	585.0	582.1	584.8
175°	593.6	596.0	588.5	586.0	586.0
177.5°	594.8	596.3	590.8	588.3	591.3
180°	592.3	592.3	592.3	592.3	592.3

(END OF REPORT)