

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: P644385

Luminaire Tested: CRQ4DIP-SR4F0-50D75U940-FLLFLL-1DUDD-WW

Issue Date: 2/20/2023



Test Information

Test Method: LM-79-2019
Report Number: P644385
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-SR4F0-50D75U940-FLLFLL-1DUDD-WW
Description: NEO-RAY CIRQUE SUSPENDED LED LUMINAIRE
DOWNLIGHT - CURVED FROSTED LENS - 500 LUMENS PER FOOT
UPLIGHT - CURVED FROSTED LENS - 750 LUMENS PER FOOT
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

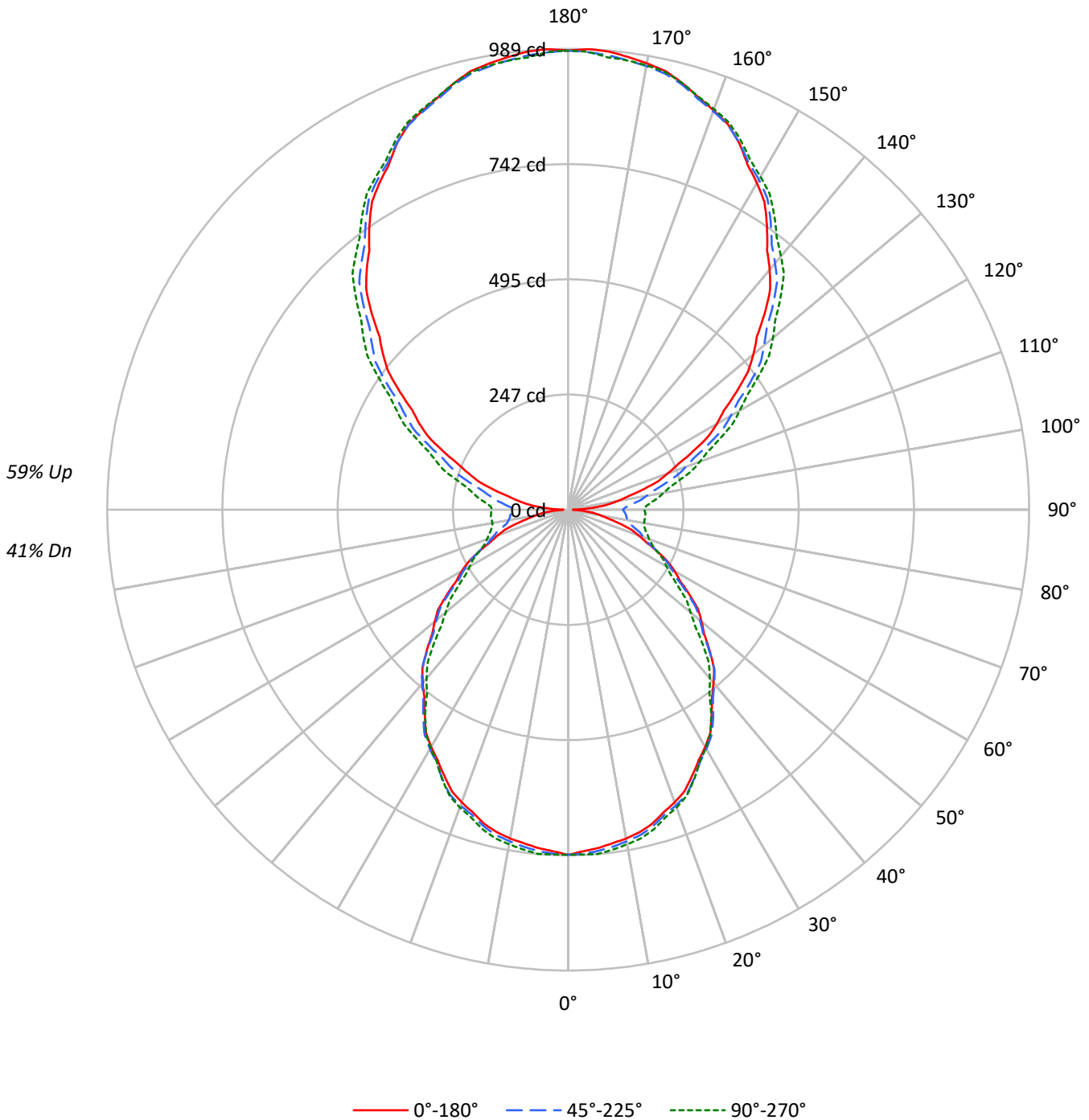
Lumens per Lamp: N/A
Luminaire Lumens: 4818.6 lumens
Efficiency: N/A
Efficacy: 137.3 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.19 / 1.3
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.33')
CIE Type: General Diffuse

Input Watts (W): 35.1
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				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	105	105	105	105	96	96	96	96	79	79	79	63	63	63	48	48	48	41			41
1	95	91	86	83	86	83	79	76	68	65	63	54	52	51	41	40	39	33			33
2	86	79	73	67	78	72	67	62	59	55	52	47	44	42	36	34	33	28			28
3	79	69	62	56	71	63	57	52	52	47	43	42	38	36	32	30	28	23			23
4	72	61	53	47	65	56	49	44	46	41	37	37	33	30	29	26	24	20			20
5	66	55	46	40	60	50	43	38	41	36	32	33	29	26	26	23	21	17			17
6	61	49	41	35	55	45	38	33	37	32	28	30	26	23	24	21	18	15			15
7	56	44	36	31	51	41	34	29	34	28	24	27	23	20	22	19	16	14			14
8	52	40	32	27	47	37	30	25	31	25	22	25	21	18	20	17	15	12			12
9	49	36	29	24	44	34	27	22	28	23	19	23	19	16	18	15	13	11			11
10	45	33	26	21	41	31	24	20	26	21	17	21	17	15	17	14	12	10			10

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11956	11956	11956
5°	11730	10555	10228
10°	11575	9405	8836
15°	11406	8423	7728
20°	11145	7557	6760
25°	10797	6738	5890
30°	10456	5974	5113
35°	9992	5266	4388
40°	9560	4594	3720
45°	9059	3950	3105
50°	8532	3365	2546
55°	7972	2827	2107
60°	7438	2339	1763
65°	6781	1931	1511
70°	6146	1604	1345
75°	5377	1396	1264
80°	4489	1289	1245
85°	3273	1293	1291

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	1.5
10°-20°	198.5	4.1
20°-30°	293.1	6.1
30°-40°	337.4	7.0
40°-50°	327.5	6.8
50°-60°	276.9	5.7
60°-70°	210.9	4.4
70°-80°	153.7	3.2
80°-90°	122.4	2.5
90°-100°	140.4	2.9
100°-110°	222.9	4.6
110°-120°	327.8	6.8
120°-130°	423.8	8.8
130°-140°	479.3	9.9
140°-150°	473.6	9.8
150°-160°	400.6	8.3
160°-170°	266.7	5.5
170°-180°	93.3	1.9
0°-30°	561.5	11.7
0°-40°	898.9	18.7
0°-60°	1503.4	31.2
0°-90°	1990.3	41.3
90°-120°	691.0	14.3
90°-150°	2067.7	42.9
90°-180°	2828.0	58.7
0°-180°	4818.6	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	710	703	705	710	196
25°	630	642	638	635	639	290
35°	536	548	543	534	534	336
45°	430	437	428	414	408	331
55°	317	325	312	294	289	284
65°	209	216	210	209	209	208
75°	113	121	145	165	172	121
85°	34	66	124	157	166	37
90°	10	56	117	152	163	9
95°	58	78	138	172	179	58
105°	164	172	213	243	248	175
115°	295	307	333	353	358	293
125°	440	456	477	494	498	395
135°	596	609	621	637	644	459
145°	744	753	757	763	771	464
155°	868	873	869	870	875	399
165°	948	952	944	941	948	267
175°	987	991	979	975	975	94
180°	985	985	985	985	985	



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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	738.8	739.6	740.5
5°	729.0	742.2	735.2	736.4	741.5
7.5°	722.3	735.4	729.4	729.7	735.6
10°	716.4	728.7	722.7	723.8	729.0
12.5°	708.9	722.0	715.2	717.1	722.3
15°	697.6	709.9	702.8	705.0	710.1
17.5°	680.8	692.9	686.5	687.2	692.4
20°	668.3	679.5	675.6	674.7	679.8
22.5°	653.2	665.3	662.2	658.8	664.7
25°	629.6	641.9	638.0	634.9	639.0
27.5°	606.2	617.4	611.4	607.1	610.1
30°	587.8	599.0	593.0	587.8	590.9
32.5°	567.7	579.8	572.9	566.9	568.3
35°	536.5	547.8	542.8	534.4	534.4
37.5°	507.0	516.4	510.0	500.1	497.8
40°	485.3	495.5	487.4	475.8	472.7
42.5°	462.7	472.9	464.8	451.5	446.8
45°	429.8	437.0	427.8	414.0	407.9
47.5°	396.0	404.1	391.8	376.3	369.0
50°	373.4	381.5	369.2	351.2	343.0
52.5°	351.6	359.0	345.8	327.0	320.4
55°	316.9	325.1	311.7	293.8	288.7
57.5°	284.5	292.4	278.2	266.2	261.3
60°	263.6	270.7	257.3	247.8	243.7
62.5°	240.1	248.1	236.4	231.9	229.5
65°	209.2	216.3	210.2	209.2	209.2
67.5°	180.1	186.2	185.7	192.1	194.3
70°	160.0	166.2	171.5	182.0	185.1
72.5°	141.6	147.7	160.6	174.5	178.4
75°	113.0	121.1	145.4	165.4	171.5
77.5°	87.9	97.3	134.7	159.6	166.9
80°	71.1	85.4	129.7	157.1	165.2
82.5°	56.1	75.3	126.3	157.1	165.2
85°	34.5	66.2	124.5	157.1	166.3
87.5°	17.2	59.7	121.3	155.2	165.7
90°	10.5	55.5	117.1	151.9	163.2
92.5°	28.0	61.6	123.8	157.7	166.5
95°	57.5	78.0	138.1	171.7	178.8
97.5°	86.8	100.3	156.2	187.6	194.5
100°	107.7	117.9	170.5	200.9	207.1
102.5°	130.3	138.1	187.2	216.0	223.0
105°	164.2	172.4	213.4	242.8	247.9
107.5°	201.8	210.6	245.4	273.1	278.4
110°	226.9	238.2	268.8	294.0	300.2

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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	254.6	265.8	293.0	316.6	322.7
115°	294.9	307.2	332.6	352.6	357.7
117.5°	337.2	350.3	373.4	392.1	397.0
120°	368.1	380.4	402.7	420.5	424.6
122.5°	395.7	409.7	431.9	449.8	453.9
125°	440.3	455.6	476.9	493.7	497.8
127.5°	486.1	501.0	520.6	537.7	543.0
130°	518.7	532.0	549.1	567.0	573.1
132.5°	548.9	562.2	577.5	595.5	602.4
135°	596.1	609.4	621.2	637.1	644.2
137.5°	641.5	654.4	663.5	676.0	685.0
140°	672.5	683.7	690.3	701.9	710.1
142.5°	700.9	712.2	717.0	727.1	735.2
145°	743.6	752.8	757.2	762.6	770.8
147.5°	783.5	792.5	794.4	799.1	804.3
150°	809.5	817.7	817.9	820.1	825.2
152.5°	833.8	841.1	838.8	840.2	846.1
155°	868.1	873.2	869.1	870.3	875.4
157.5°	895.2	900.4	894.0	896.0	900.1
160°	912.0	917.1	909.9	911.0	915.1
162.5°	927.9	931.4	924.9	923.6	929.3
165°	947.5	951.6	944.4	941.4	947.5
167.5°	964.3	968.4	958.8	955.6	961.8
170°	972.6	976.7	966.4	962.3	968.5
172.5°	980.2	984.3	973.1	968.1	972.6
175°	987.3	991.4	978.9	974.7	974.7
177.5°	989.4	991.8	982.7	978.6	983.5
180°	985.2	985.2	985.2	985.2	985.2

(END OF REPORT)