

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: P644355

Luminaire Tested: CRQ4DIP-SR4F0-50D25U840-FLLFLL-1DUDD-WW

Issue Date: 2/20/2023



Test Information

Test Method: LM-79-2019
Report Number: P644355
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-SR4F0-50D25U840-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: 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

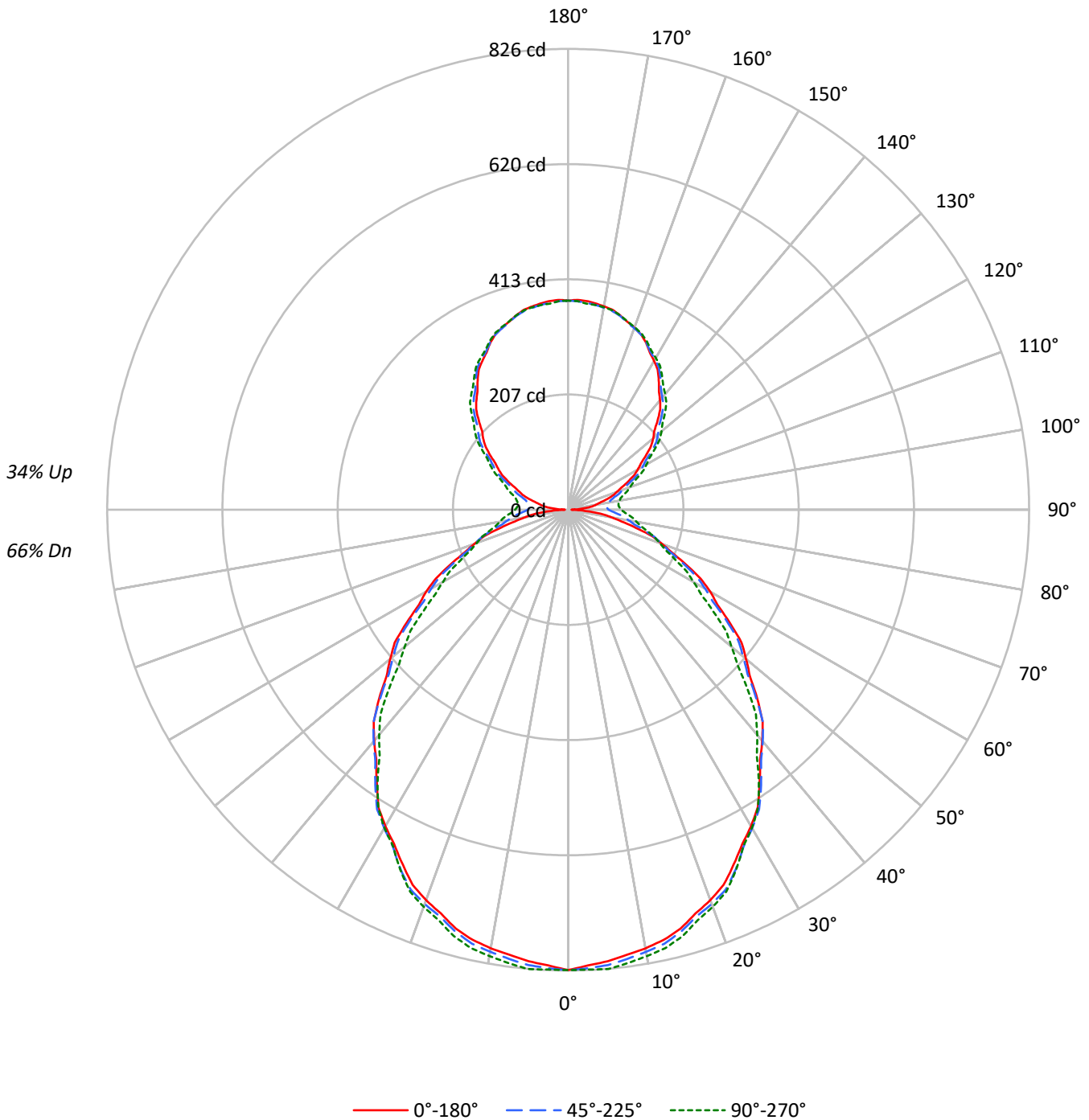
Lumens per Lamp: N/A
Luminaire Lumens: 3234.2 lumens
Efficiency: N/A
Efficacy: 143.1 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.19 / 1.3
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.33')
CIE Type: Semi-Direct

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									
RC	80									70									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	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°	13322	13322	13322
5°	13070	11763	11398
10°	12899	10470	9846
15°	12709	9377	8612
20°	12419	8412	7532
25°	12031	7508	6564
30°	11651	6641	5698
35°	11133	5846	4890
40°	10651	5112	4146
45°	10096	4394	3459
50°	9505	3729	2838
55°	8882	3136	2309
60°	8288	2579	1876
65°	7555	2081	1528
70°	6849	1666	1265
75°	5991	1341	1075
80°	5001	1093	936
85°	3653	931	843

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 10096 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	77.9	2.4
10°-20°	221.1	6.8
20°-30°	326.4	10.1
30°-40°	375.4	11.6
40°-50°	364.2	11.3
50°-60°	305.9	9.5
60°-70°	224.7	6.9
70°-80°	146.8	4.5
80°-90°	89.5	2.8
90°-100°	70.4	2.2
100°-110°	90.9	2.8
110°-120°	126.9	3.9
120°-130°	162.1	5.0
130°-140°	182.5	5.6
140°-150°	180.2	5.6
150°-160°	152.4	4.7
160°-170°	101.5	3.1
170°-180°	35.5	1.1
0°-30°	625.3	19.3
0°-40°	1000.7	30.9
0°-60°	1670.9	51.7
0°-90°	2131.9	65.9
90°-120°	288.2	8.9
90°-150°	813.0	25.1
90°-180°	1102.0	34.1
0°-180°	3234.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	825	825	825	825	825	
5°	812	827	819	821	826	77
15°	777	790	782	786	791	219
25°	702	714	711	708	712	323
35°	598	608	602	596	596	374
45°	479	485	476	461	454	369
55°	353	359	346	325	316	317
65°	233	237	227	215	212	232
75°	126	129	140	145	146	135
85°	38	56	90	105	109	41
90°	6	36	72	90	95	6
95°	30	37	69	87	90	28
105°	70	69	85	99	103	75
115°	118	119	128	136	138	117
125°	171	175	182	188	189	153
135°	227	232	236	242	245	175
145°	283	286	288	290	293	177
155°	330	332	331	331	333	152
165°	360	362	359	358	360	102
175°	376	377	372	371	371	36
180°	375	375	375	375	375	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	825.1	825.1	825.1	825.1	825.1
2.5°	817.6	829.5	822.6	824.2	825.1
5°	812.3	827.1	819.3	820.6	826.3
7.5°	804.8	818.8	812.0	813.1	819.7
10°	798.3	812.0	804.5	806.6	812.3
12.5°	789.9	803.3	796.7	799.1	804.8
15°	777.3	789.5	782.4	785.6	791.3
17.5°	758.7	771.4	764.2	765.8	771.5
20°	744.7	756.5	752.1	751.8	757.5
22.5°	727.9	740.6	737.2	734.1	740.7
25°	701.6	713.7	710.9	707.5	712.1
27.5°	675.5	685.3	680.4	676.5	679.9
30°	655.0	666.0	659.2	655.0	658.5
32.5°	632.6	643.9	636.9	631.7	633.3
35°	597.8	608.1	602.5	595.5	595.5
37.5°	565.0	572.5	567.5	557.2	554.7
40°	540.7	549.1	542.3	530.2	526.8
42.5°	515.6	524.0	516.5	503.1	497.9
45°	479.0	484.7	475.9	461.3	454.5
47.5°	441.2	447.5	435.5	419.4	411.2
50°	416.0	422.9	409.1	391.4	382.3
52.5°	391.8	397.2	383.6	363.7	355.9
55°	353.1	359.2	345.8	325.0	316.3
57.5°	317.0	322.9	307.5	289.6	282.5
60°	293.7	298.7	283.6	266.1	259.3
62.5°	267.6	272.9	259.1	245.3	239.1
65°	233.1	236.6	226.6	215.3	211.6
67.5°	200.7	203.0	196.4	190.7	188.6
70°	178.3	180.6	178.1	175.9	174.0
72.5°	157.8	159.5	161.7	162.6	161.7
75°	125.9	129.0	139.7	145.0	145.8
77.5°	97.9	100.3	121.1	130.2	132.3
80°	79.2	84.7	110.0	121.9	124.3
82.5°	62.5	71.0	101.3	115.2	117.5
85°	38.5	55.8	89.6	105.0	108.6
87.5°	18.0	43.4	79.3	96.2	100.3
90°	6.3	36.2	72.2	90.0	95.1
92.5°	15.4	34.9	69.8	87.4	92.1
95°	29.6	36.6	68.6	86.8	90.3
97.5°	42.2	42.7	71.1	87.5	91.1
100°	50.2	48.8	74.1	89.5	93.4
102.5°	58.2	55.9	78.0	92.8	96.3
105°	70.1	68.8	85.0	99.3	102.7
107.5°	83.6	82.5	95.5	108.2	111.0
110°	92.5	93.0	103.8	115.0	118.0



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	103.0	103.5	113.0	122.3	125.4
115°	117.6	119.3	128.1	135.7	137.6
117.5°	132.7	135.6	143.4	149.8	151.7
120°	143.9	147.1	154.0	160.0	161.6
122.5°	154.4	157.6	165.1	171.1	172.7
125°	170.6	174.9	182.2	187.9	189.4
127.5°	187.1	192.2	198.9	204.6	206.6
130°	198.9	204.0	209.7	215.7	218.1
132.5°	209.1	214.2	219.9	226.6	229.2
135°	226.8	231.9	236.4	242.4	245.1
137.5°	244.1	249.0	252.4	257.2	260.6
140°	255.9	260.1	262.6	267.1	270.2
142.5°	266.7	271.0	272.8	276.6	279.7
145°	282.9	286.4	288.1	290.2	293.3
147.5°	298.1	301.5	302.3	304.1	306.0
150°	308.0	311.1	311.2	312.0	314.0
152.5°	317.2	320.0	319.1	319.7	321.9
155°	330.3	332.2	330.7	331.1	333.1
157.5°	340.6	342.6	340.1	340.9	342.4
160°	347.0	348.9	346.2	346.6	348.2
162.5°	353.0	354.4	351.9	351.4	353.6
165°	360.5	362.1	359.3	358.2	360.5
167.5°	366.9	368.4	364.8	363.6	365.9
170°	370.1	371.6	367.7	366.1	368.5
172.5°	372.9	374.5	370.2	368.4	370.1
175°	375.6	377.2	372.5	370.9	370.9
177.5°	376.4	377.4	373.9	372.3	374.2
180°	374.8	374.8	374.8	374.8	374.8

(END OF REPORT)