

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: P644229

Luminaire Tested: CRQ4DIP-SR4F0-100D50U940-FLLFLL-1DUDD-WW

Issue Date: 2/20/2023



Test Information

Test Method: LM-79-2019
Report Number: P644229
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-SR4F0-100D50U940-FLLFLL-1DUDD-WW
Description: NEO-RAY CIRQUE SUSPENDED LED LUMINAIRE
DOWNLIGHT - CURVED FROSTED LENS - 1000 LUMENS PER FOOT
UPLIGHT - CURVED FROSTED LENS - 500 LUMENS PER FOOT
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

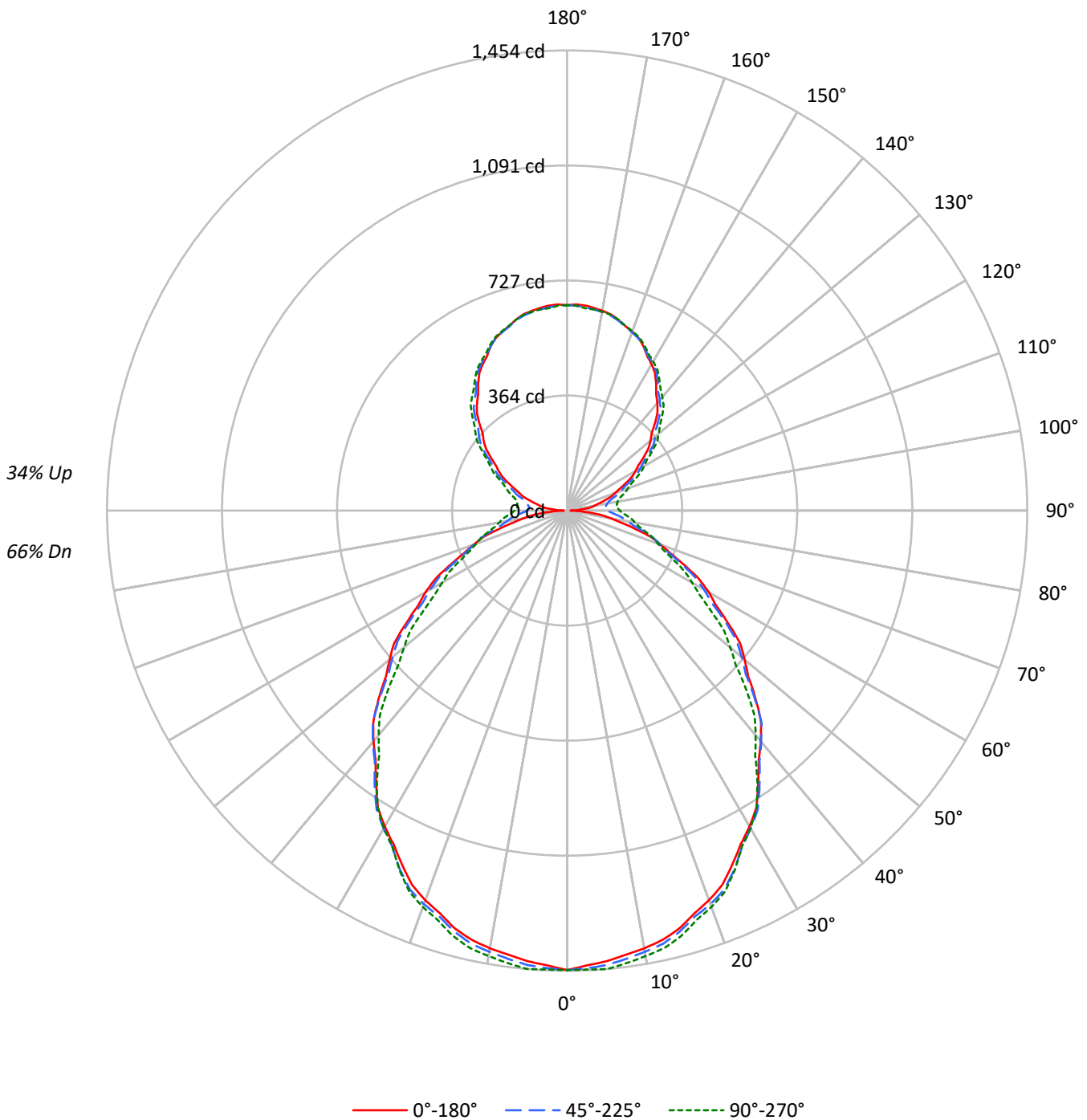
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5659.7 lumens
Efficiency: N/A
Efficacy: 127.2 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): 44.5
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

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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	105	105	105	105	92	92	92	81	81	81	71	71	71	66																			
1	101	96	92	88	95	91	87	84	80	77	75	71	69	67	62	60	59	55																			
2	92	84	77	72	86	79	73	69	70	66	62	62	59	56	54	52	50	46																			
3	84	74	66	60	79	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	41	43	40	37	33																			
5	71	59	50	44	66	56	48	42	50	43	39	44	39	35	39	35	32	29																			
6	65	53	44	38	61	50	42	37	45	39	34	40	35	31	36	31	28	26																			
7	60	48	40	34	57	45	38	32	41	35	30	37	31	28	33	28	25	23																			
8	56	43	35	30	53	41	34	29	37	31	27	34	28	25	30	26	23	20																			
9	52	40	32	27	49	38	31	26	34	28	24	31	26	22	28	24	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°	23439	23439	23439
5°	22995	20694	20052
10°	22693	18421	17321
15°	22361	16497	15152
20°	21849	14800	13252
25°	21167	13208	11548
30°	20497	11685	10024
35°	19588	10286	8603
40°	18742	8993	7294
45°	17762	7730	6086
50°	16726	6560	4993
55°	15629	5517	4062
60°	14581	4536	3299
65°	13292	3660	2687
70°	12050	2928	2222
75°	10535	2357	1886
80°	8802	1918	1641
85°	6423	1629	1474

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 17762 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	137.1	2.4
10°-20°	388.9	6.9
20°-30°	574.2	10.1
30°-40°	660.4	11.7
40°-50°	640.8	11.3
50°-60°	538.2	9.5
60°-70°	395.3	7.0
70°-80°	257.9	4.6
80°-90°	156.8	2.8
90°-100°	122.6	2.2
100°-110°	157.8	2.8
110°-120°	219.8	3.9
120°-130°	280.8	5.0
130°-140°	316.0	5.6
140°-150°	312.1	5.5
150°-160°	264.0	4.7
160°-170°	175.7	3.1
170°-180°	61.5	1.1
0°-30°	1100.2	19.4
0°-40°	1760.6	31.1
0°-60°	2939.6	51.9
0°-90°	3749.5	66.2
90°-120°	500.2	8.8
90°-150°	1409.1	24.9
90°-180°	1910.0	33.7
0°-180°	5659.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1452	1452	1452	1452	1452	
5°	1429	1455	1441	1444	1454	136
15°	1368	1389	1376	1382	1392	385
25°	1234	1256	1251	1245	1253	569
35°	1052	1070	1060	1048	1048	659
45°	843	853	837	812	800	650
55°	621	632	608	572	556	557
65°	410	416	398	379	372	408
75°	221	227	246	255	256	237
85°	68	98	157	184	190	72
90°	11	63	126	157	166	11
95°	52	64	120	151	157	50
105°	122	119	147	172	178	130
115°	204	207	222	235	238	202
125°	296	303	316	325	328	265
135°	393	402	409	420	424	303
145°	490	496	499	502	508	306
155°	572	575	573	574	577	263
165°	624	627	622	620	624	176
175°	651	653	645	642	642	62
180°	649	649	649	649	649	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1451.7	1451.7	1451.7	1451.7	1451.7
2.5°	1438.5	1459.4	1447.3	1450.1	1451.7
5°	1429.1	1455.2	1441.4	1443.7	1453.7
7.5°	1416.0	1440.6	1428.6	1430.6	1442.2
10°	1404.5	1428.6	1415.4	1419.1	1429.1
12.5°	1389.7	1413.3	1401.8	1406.0	1416.0
15°	1367.6	1389.0	1376.5	1382.2	1392.2
17.5°	1334.8	1357.1	1344.5	1347.3	1357.3
20°	1310.2	1330.9	1323.2	1322.7	1332.7
22.5°	1280.7	1303.0	1296.9	1291.6	1303.2
25°	1234.3	1255.7	1250.7	1244.8	1252.8
27.5°	1188.4	1205.7	1197.0	1190.2	1196.2
30°	1152.3	1171.7	1159.8	1152.4	1158.5
32.5°	1112.9	1132.9	1120.5	1111.4	1114.2
35°	1051.8	1069.9	1060.1	1047.7	1047.7
37.5°	994.0	1007.1	998.4	980.4	976.0
40°	951.4	966.1	954.1	932.8	926.8
42.5°	907.1	921.8	908.7	885.1	875.9
45°	842.7	852.7	837.2	811.7	799.6
47.5°	776.3	787.2	766.2	737.8	723.4
50°	732.0	744.0	719.7	688.6	672.5
52.5°	689.3	698.7	674.9	639.9	626.1
55°	621.3	632.0	608.3	571.7	556.4
57.5°	557.7	568.0	541.0	509.5	496.9
60°	516.7	525.4	498.9	468.0	456.0
62.5°	470.8	480.0	455.8	431.4	420.4
65°	410.1	416.1	398.5	378.6	372.0
67.5°	353.1	357.1	345.4	335.3	331.4
70°	313.7	317.7	313.1	309.0	305.7
72.5°	277.6	280.6	284.2	285.6	283.9
75°	221.4	226.8	245.5	254.6	255.9
77.5°	172.2	176.3	212.6	228.4	232.0
80°	139.4	148.9	193.0	213.7	217.8
82.5°	109.9	124.7	177.7	201.7	205.8
85°	67.7	97.9	156.9	183.8	189.9
87.5°	31.7	76.0	138.7	168.2	175.3
90°	11.0	63.3	126.2	157.3	166.0
92.5°	26.9	61.0	121.9	152.4	160.6
95°	51.5	63.7	119.6	151.3	157.3
97.5°	73.5	74.2	123.7	152.2	158.4
100°	87.3	84.7	128.7	155.6	162.3
102.5°	101.1	96.9	135.3	161.2	167.3
105°	121.8	119.2	147.4	172.3	178.3
107.5°	145.0	143.1	165.5	187.6	192.4
110°	160.4	161.2	179.8	199.2	204.6



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	178.6	179.4	195.8	211.9	217.3
115°	203.9	206.6	221.9	235.0	238.4
117.5°	230.1	235.0	248.5	259.5	262.7
120°	249.4	254.8	266.7	277.1	279.8
122.5°	267.6	273.0	286.0	296.4	299.1
125°	295.6	303.0	315.6	325.3	328.0
127.5°	324.1	332.9	344.4	354.3	357.8
130°	344.5	353.3	363.2	373.6	377.7
132.5°	362.2	371.0	380.8	392.4	397.0
135°	392.8	401.6	409.4	419.8	424.5
137.5°	422.7	431.2	437.2	445.5	451.4
140°	443.1	450.5	454.8	462.6	467.9
142.5°	461.9	469.3	472.5	479.1	484.5
145°	490.0	496.1	499.0	502.5	507.9
147.5°	516.3	522.3	523.5	526.6	530.0
150°	533.4	538.8	538.9	540.4	543.7
152.5°	549.4	554.3	552.7	553.6	557.5
155°	572.0	575.4	572.7	573.5	576.8
157.5°	589.9	593.3	589.1	590.4	593.1
160°	600.9	604.3	599.6	600.3	603.0
162.5°	611.4	613.7	609.5	608.6	612.4
165°	624.4	627.1	622.3	620.3	624.4
167.5°	635.4	638.1	631.8	629.7	633.8
170°	640.9	643.6	636.8	634.1	638.2
172.5°	645.9	648.6	641.2	638.0	640.9
175°	650.6	653.3	645.1	642.3	642.3
177.5°	651.9	653.6	647.5	644.9	648.1
180°	649.2	649.2	649.2	649.2	649.2

(END OF REPORT)