

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: P644231

Luminaire Tested: CRQ4DIP-SR4F0-100D75U830-FLLFLL-1DUDD-WW

Issue Date: 2/20/2023



Test Information

Test Method: LM-79-2019
Report Number: P644231
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-SR4F0-100D75U830-FLLFLL-1DUDD-WW
Description: NEO-RAY CIRQUE SUSPENDED LED LUMINAIRE
DOWNLIGHT - CURVED FROSTED LENS - 1000 LUMENS PER FOOT
UPLIGHT - CURVED FROSTED LENS - 750 LUMENS PER FOOT
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

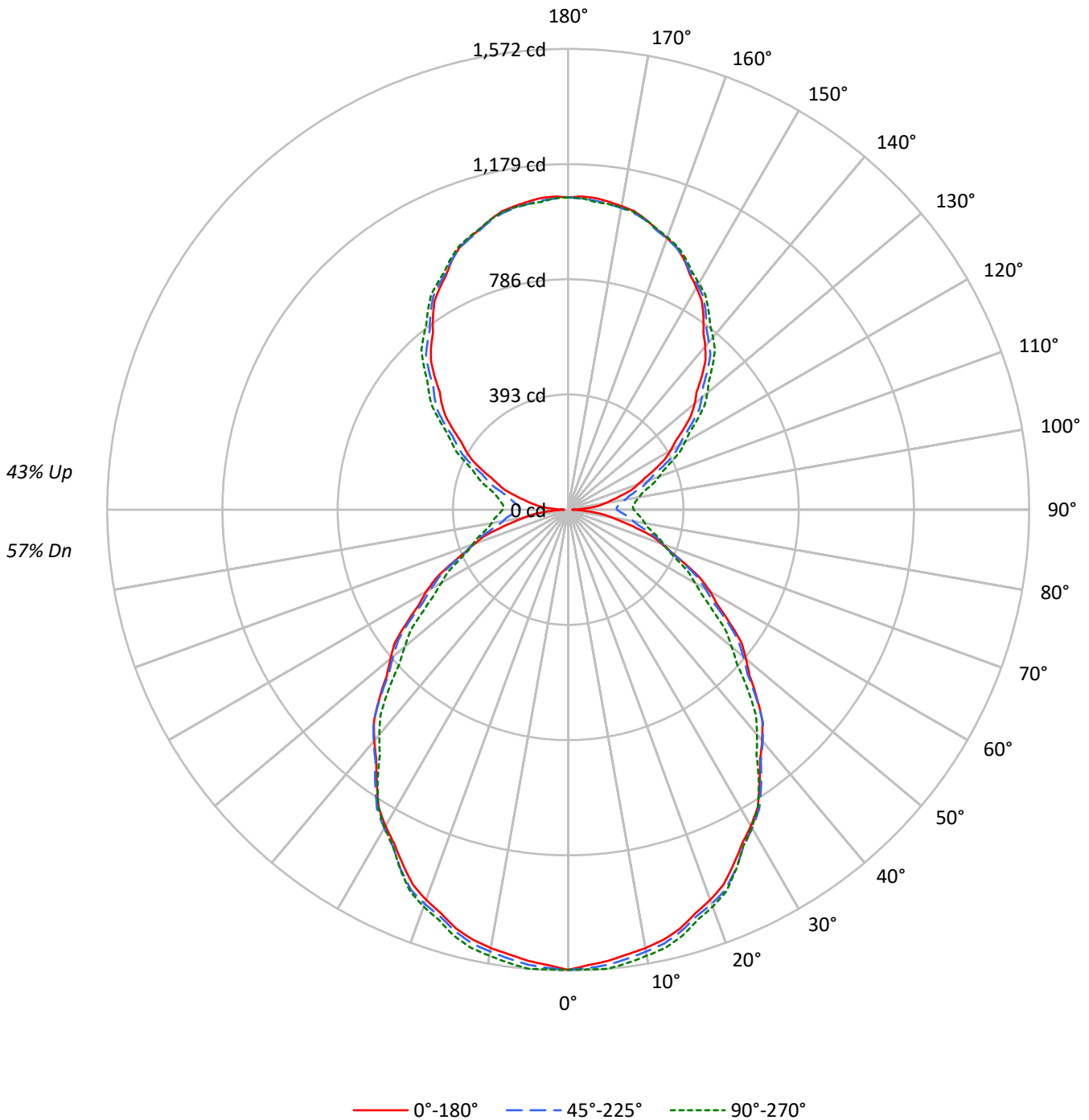
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7191.4 lumens
Efficiency: N/A
Efficacy: 141.8 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): 50.7
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				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	109	109	109	109	101	101	101	101	87	87	87	74	74	74	63	63	63	57
1	99	94	90	86	92	88	84	81	76	73	70	64	63	61	54	53	52	47
2	90	82	76	70	83	77	71	66	66	62	58	57	53	51	48	45	43	39
3	82	72	65	59	76	67	61	55	58	53	49	50	46	43	42	39	37	33
4	75	64	56	50	70	60	53	47	52	46	42	45	40	37	38	35	32	28
5	69	57	49	43	64	53	46	40	47	41	36	40	36	32	34	31	28	25
6	64	51	43	37	59	48	41	35	42	36	32	36	32	28	31	27	25	22
7	59	46	38	33	55	44	36	31	38	32	28	33	28	25	28	25	22	19
8	55	42	34	29	51	40	33	28	35	29	25	30	26	22	26	22	20	17
9	51	39	31	26	47	36	29	25	32	26	22	28	23	20	24	21	18	16
10	48	35	28	23	44	33	27	22	30	24	20	26	21	18	22	19	16	14

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	25339	25339	25339
5°	24859	22373	21678
10°	24534	19920	18726
15°	24174	17839	16380
20°	23620	16003	14327
25°	22883	14279	12484
30°	22158	12640	10836
35°	21177	11131	9301
40°	20261	9725	7885
45°	19201	8360	6580
50°	18081	7103	5397
55°	16894	5971	4410
60°	15763	4918	3610
65°	14368	3993	2983
70°	13026	3228	2520
75°	11392	2656	2207
80°	9515	2246	2000
85°	6936	2018	1893

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 19201 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	148.2	2.1
10°-20°	420.5	5.8
20°-30°	620.9	8.6
30°-40°	714.3	9.9
40°-50°	693.1	9.6
50°-60°	583.1	8.1
60°-70°	432.4	6.0
70°-80°	291.1	4.0
80°-90°	193.1	2.7
90°-100°	175.8	2.4
100°-110°	249.6	3.5
110°-120°	357.4	5.0
120°-130°	459.4	6.4
130°-140°	518.3	7.2
140°-150°	512.0	7.1
150°-160°	433.0	6.0
160°-170°	288.3	4.0
170°-180°	100.8	1.4
0°-30°	1189.6	16.5
0°-40°	1903.9	26.5
0°-60°	3180.1	44.2
0°-90°	4096.7	57.0
90°-120°	782.8	10.9
90°-150°	2272.5	31.6
90°-180°	3095.0	43.0
0°-180°	7191.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1569	1569	1569	1569	1569	
5°	1545	1573	1558	1561	1572	147
15°	1478	1502	1488	1494	1505	416
25°	1334	1358	1352	1346	1354	615
35°	1137	1158	1147	1133	1133	712
45°	911	923	906	878	864	702
55°	672	685	658	619	604	602
65°	443	452	435	418	413	441
75°	239	248	277	295	300	256
85°	73	115	194	234	244	77
90°	15	81	166	210	223	14
95°	73	94	172	216	225	72
105°	188	191	236	272	280	201
115°	326	336	362	383	389	324
125°	480	495	517	534	538	430
135°	644	659	672	689	696	497
145°	804	814	819	824	833	502
155°	938	944	940	941	946	431
165°	1024	1029	1021	1018	1024	289
175°	1067	1072	1058	1054	1054	101
180°	1065	1065	1065	1065	1065	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1569.4	1569.4	1569.4	1569.4	1569.4
2.5°	1555.2	1577.7	1564.9	1567.6	1569.4
5°	1545.0	1573.1	1558.3	1560.7	1571.6
7.5°	1530.8	1557.7	1544.8	1546.6	1559.2
10°	1518.4	1544.4	1530.6	1534.1	1545.0
12.5°	1502.4	1528.5	1515.5	1519.9	1530.8
15°	1478.5	1502.4	1488.5	1494.2	1505.1
17.5°	1443.0	1467.5	1453.9	1456.6	1467.4
20°	1416.4	1439.2	1430.8	1430.0	1440.8
22.5°	1384.5	1409.0	1402.5	1396.3	1408.9
25°	1334.4	1358.3	1352.1	1345.7	1354.3
27.5°	1284.7	1304.8	1294.5	1286.7	1293.2
30°	1245.7	1267.4	1254.6	1245.9	1252.4
32.5°	1203.2	1225.8	1212.1	1201.5	1204.5
35°	1137.1	1157.8	1147.2	1132.7	1132.7
37.5°	1074.6	1090.3	1079.7	1059.9	1055.1
40°	1028.5	1045.9	1031.8	1008.4	1001.9
42.5°	980.6	998.0	983.1	956.9	946.9
45°	911.0	923.0	905.5	877.5	864.5
47.5°	839.2	852.5	828.8	797.6	782.0
50°	791.3	805.5	779.2	744.4	727.0
52.5°	745.2	756.8	730.4	692.1	677.4
55°	671.6	684.7	658.4	619.3	604.2
57.5°	602.9	615.6	586.1	554.3	541.5
60°	558.6	569.5	540.9	510.9	499.1
62.5°	508.9	520.7	494.9	473.0	462.9
65°	443.3	452.1	434.7	418.2	412.9
67.5°	381.7	388.3	378.7	374.1	372.3
70°	339.1	345.8	345.1	347.7	346.7
72.5°	300.1	305.9	315.9	324.8	325.6
75°	239.4	248.2	276.6	294.9	299.5
77.5°	186.2	194.7	244.4	270.9	277.8
80°	150.7	166.2	226.0	257.7	265.5
82.5°	118.8	141.3	211.9	248.2	256.0
85°	73.1	114.9	194.3	233.9	243.8
87.5°	34.8	93.8	178.1	220.4	231.9
90°	14.6	81.3	165.7	209.9	223.1
92.5°	37.0	82.9	166.0	209.2	220.6
95°	73.0	94.1	172.0	216.0	224.8
97.5°	106.9	114.9	185.4	225.6	234.4
100°	129.5	133.1	197.3	235.7	244.5
102.5°	153.0	154.0	211.9	248.6	257.3
105°	188.4	190.8	236.1	272.3	279.9
107.5°	227.8	231.1	268.3	301.3	308.1
110°	254.0	260.9	292.7	322.2	329.9



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	283.9	290.7	319.0	344.9	352.6
115°	326.4	335.5	361.7	383.3	388.9
117.5°	370.8	382.0	405.6	424.8	430.1
120°	403.4	414.6	436.4	454.6	459.0
122.5°	433.3	445.3	468.0	486.3	490.7
125°	480.3	494.8	516.7	533.8	538.2
127.5°	528.6	543.9	563.9	581.3	587.0
130°	563.0	577.3	594.7	613.0	619.6
132.5°	593.8	608.2	624.6	643.7	651.2
135°	644.5	658.8	671.6	688.7	696.5
137.5°	693.5	707.5	717.3	730.8	740.6
140°	727.0	739.2	746.2	758.9	767.7
142.5°	757.8	769.9	775.2	786.0	794.8
145°	803.9	813.8	818.6	824.4	833.3
147.5°	847.1	856.8	858.8	863.9	869.5
150°	875.1	884.0	884.2	886.5	892.1
152.5°	901.3	909.3	906.8	908.3	914.7
155°	938.4	944.0	939.6	940.8	946.3
157.5°	967.8	973.4	966.5	968.6	973.0
160°	985.9	991.4	983.7	984.9	989.3
162.5°	1003.1	1006.9	999.9	998.5	1004.7
165°	1024.4	1028.8	1021.0	1017.7	1024.4
167.5°	1042.5	1046.9	1036.6	1033.1	1039.7
170°	1051.5	1055.9	1044.7	1040.3	1047.0
172.5°	1059.6	1064.1	1051.9	1046.6	1051.5
175°	1067.3	1071.7	1058.3	1053.8	1053.8
177.5°	1069.6	1072.2	1062.4	1057.9	1063.3
180°	1065.1	1065.1	1065.1	1065.1	1065.1

(END OF REPORT)