

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: P644221

Luminaire Tested: CRQ4DIP-SR4F0-100D50U835-FLLFLL-1DUDD-WW

Issue Date: 2/20/2023



Test Information

Test Method: LM-79-2019
Report Number: P644221
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-SR4F0-100D50U835-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: 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

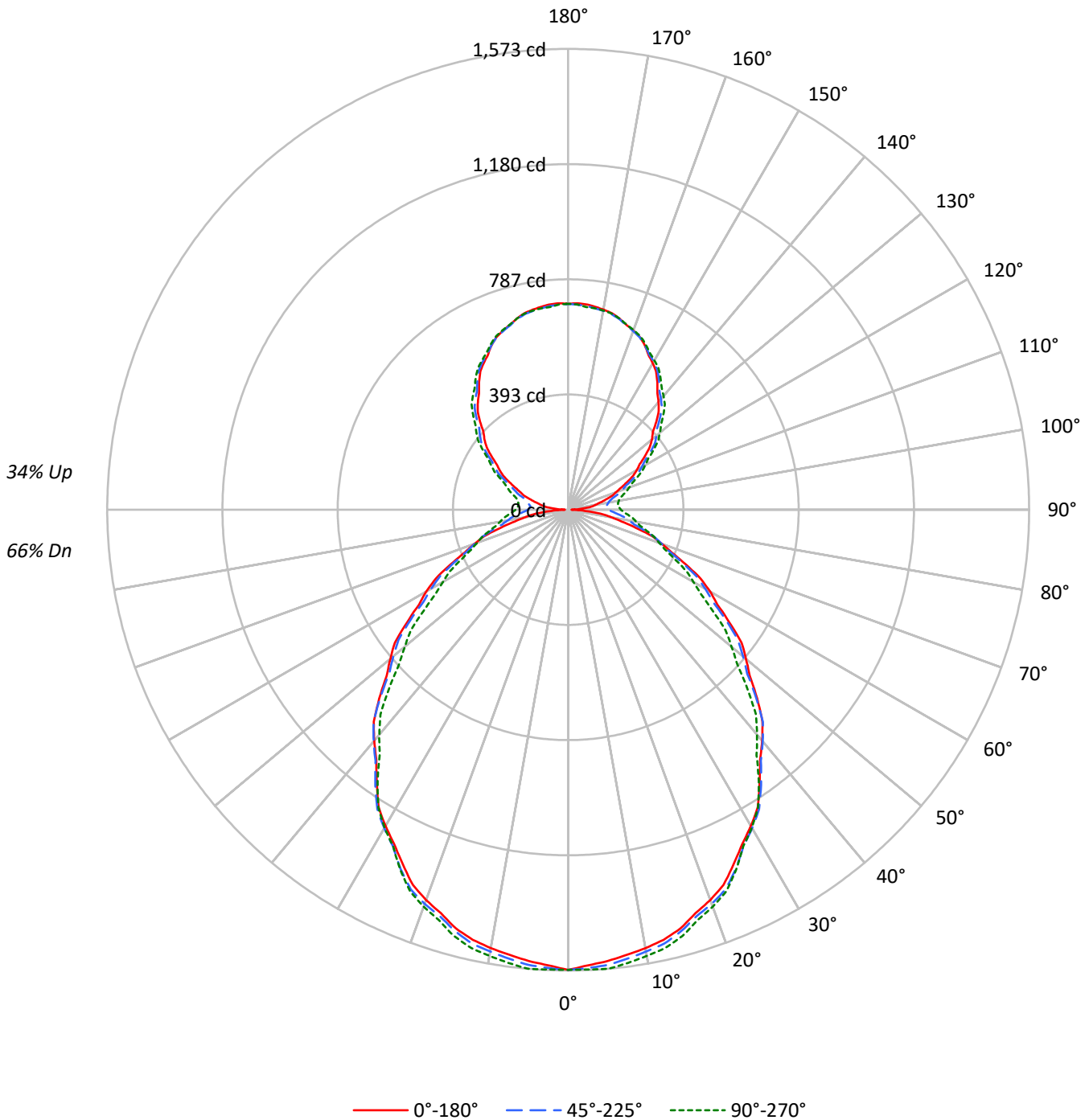
Lumens per Lamp: N/A
Luminaire Lumens: 6124.1 lumens
Efficiency: N/A
Efficacy: 137.6 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.19 / 1.3
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.33')
CIE Type: Semi-Direct

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				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	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°	25362	25362	25362
5°	24882	22393	21698
10°	24555	19933	18743
15°	24195	17850	16394
20°	23642	16013	14340
25°	22904	14292	12496
30°	22180	12644	10846
35°	21196	11129	9309
40°	20279	9731	7892
45°	19218	8364	6586
50°	18097	7098	5402
55°	16910	5969	4394
60°	15777	4909	3569
65°	14381	3961	2907
70°	13037	3169	2404
75°	11401	2551	2041
80°	9528	2075	1776
85°	6945	1762	1596

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 19218 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	148.3	2.4
10°-20°	420.8	6.9
20°-30°	621.3	10.1
30°-40°	714.6	11.7
40°-50°	693.4	11.3
50°-60°	582.4	9.5
60°-70°	427.7	7.0
70°-80°	279.0	4.6
80°-90°	169.6	2.8
90°-100°	132.7	2.2
100°-110°	170.7	2.8
110°-120°	237.8	3.9
120°-130°	303.9	5.0
130°-140°	342.0	5.6
140°-150°	337.7	5.5
150°-160°	285.6	4.7
160°-170°	190.2	3.1
170°-180°	66.5	1.1
0°-30°	1190.4	19.4
0°-40°	1905.0	31.1
0°-60°	3180.8	51.9
0°-90°	4057.1	66.2
90°-120°	541.2	8.8
90°-150°	1524.7	24.9
90°-180°	2067.0	33.8
0°-180°	6124.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1571	1571	1571	1571	1571	
5°	1546	1575	1560	1562	1573	147
15°	1480	1503	1489	1496	1506	416
25°	1336	1359	1353	1347	1356	615
35°	1138	1158	1147	1134	1134	713
45°	912	923	906	878	865	703
55°	672	684	658	619	602	603
65°	444	450	431	410	402	441
75°	240	245	266	276	277	256
85°	73	106	170	199	206	77
90°	12	68	136	170	180	12
95°	56	69	129	164	170	54
105°	132	129	160	186	193	140
115°	221	224	240	254	258	219
125°	320	328	342	352	355	286
135°	425	434	443	454	459	328
145°	530	537	540	544	550	331
155°	619	623	620	620	624	284
165°	676	678	673	671	676	190
175°	704	707	698	695	695	67
180°	702	702	702	702	702	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1570.8	1570.8	1570.8	1570.8	1570.8
2.5°	1556.6	1579.1	1566.0	1569.0	1570.8
5°	1546.4	1574.6	1559.7	1562.1	1573.0
7.5°	1532.2	1558.8	1545.8	1548.0	1560.6
10°	1519.7	1545.8	1531.6	1535.5	1546.4
12.5°	1503.8	1529.2	1516.8	1521.3	1532.2
15°	1479.8	1503.0	1489.4	1495.6	1506.4
17.5°	1444.3	1468.5	1454.8	1457.9	1468.7
20°	1417.7	1440.1	1431.7	1431.2	1442.1
22.5°	1385.7	1409.9	1403.3	1397.6	1410.1
25°	1335.6	1358.7	1353.3	1346.9	1355.6
27.5°	1285.9	1304.6	1295.2	1287.8	1294.3
30°	1246.9	1267.8	1255.0	1247.0	1253.5
32.5°	1204.3	1225.8	1212.4	1202.5	1205.6
35°	1138.1	1157.7	1147.0	1133.7	1133.7
37.5°	1075.6	1089.8	1080.3	1060.8	1056.1
40°	1029.4	1045.4	1032.4	1009.3	1002.8
42.5°	981.5	997.4	983.3	957.8	947.8
45°	911.8	922.7	905.9	878.3	865.3
47.5°	840.0	851.8	829.0	798.3	782.7
50°	792.0	805.1	778.7	745.1	727.7
52.5°	745.9	756.0	730.2	692.5	677.4
55°	672.2	683.8	658.2	618.6	602.0
57.5°	603.5	614.6	585.4	551.3	537.7
60°	559.1	568.5	539.9	506.4	493.4
62.5°	509.4	519.4	493.2	466.8	454.9
65°	443.7	450.3	431.2	409.7	402.5
67.5°	382.0	386.4	373.7	362.8	358.6
70°	339.4	343.8	338.8	334.4	330.8
72.5°	300.4	303.6	307.5	309.0	307.2
75°	239.6	245.4	265.7	275.5	276.9
77.5°	186.4	190.8	230.1	247.2	251.0
80°	150.9	161.1	208.8	231.3	235.7
82.5°	118.9	134.9	192.3	218.3	222.7
85°	73.2	105.9	169.7	198.9	205.5
87.5°	34.3	82.2	150.1	182.0	189.7
90°	11.9	68.4	136.5	170.2	179.7
92.5°	29.1	66.0	131.9	164.9	173.8
95°	55.7	68.9	129.4	163.7	170.2
97.5°	79.6	80.3	133.8	164.7	171.4
100°	94.5	91.7	139.2	168.4	175.6
102.5°	109.4	104.9	146.4	174.4	181.1
105°	131.8	129.0	159.5	186.4	192.9
107.5°	156.9	154.8	179.1	203.0	208.2
110°	173.6	174.4	194.6	215.6	221.4



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	193.3	194.1	211.9	229.3	235.1
115°	220.6	223.6	240.1	254.3	258.0
117.5°	249.0	254.3	268.9	280.7	284.2
120°	269.9	275.7	288.6	299.8	302.8
122.5°	289.5	295.4	309.5	320.7	323.6
125°	319.8	327.9	341.5	352.0	355.0
127.5°	350.7	360.2	372.7	383.4	387.2
130°	372.8	382.3	393.0	404.3	408.6
132.5°	391.9	401.4	412.1	424.6	429.5
135°	425.1	434.5	443.0	454.3	459.4
137.5°	457.4	466.6	473.1	482.0	488.4
140°	479.5	487.5	492.2	500.5	506.3
142.5°	499.8	507.8	511.3	518.4	524.2
145°	530.2	536.8	539.9	543.8	549.6
147.5°	558.7	565.1	566.4	569.8	573.5
150°	577.2	583.0	583.1	584.7	588.4
152.5°	594.5	599.7	598.1	599.1	603.3
155°	618.9	622.6	619.7	620.5	624.2
157.5°	638.3	642.0	637.4	638.8	641.8
160°	650.3	653.9	648.8	649.6	652.5
162.5°	661.6	664.1	659.5	658.6	662.6
165°	675.6	678.5	673.4	671.2	675.6
167.5°	687.5	690.5	683.7	681.4	685.8
170°	693.5	696.4	689.0	686.2	690.5
172.5°	698.9	701.8	693.8	690.3	693.5
175°	703.9	706.9	698.0	695.0	695.0
177.5°	705.4	707.2	700.7	697.8	701.3
180°	702.5	702.5	702.5	702.5	702.5

(END OF REPORT)