

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: P644345

Luminaire Tested: CRQ4DIP-SR4F0-50D150U930-FLLFLL-1DUDD-WW

Issue Date: 2/20/2023



Test Information

Test Method: LM-79-2019
Report Number: P644345
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-SR4F0-50D150U930-FLLFLL-1DUDD-WW
Description: NEO-RAY CIRQUE SUSPENDED LED LUMINAIRE
DOWNLIGHT - CURVED FROSTED LENS - 500 LUMENS PER FOOT
UPLIGHT - CURVED FROSTED LENS - 1500 LUMENS PER FOOT
Light Source: 3000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

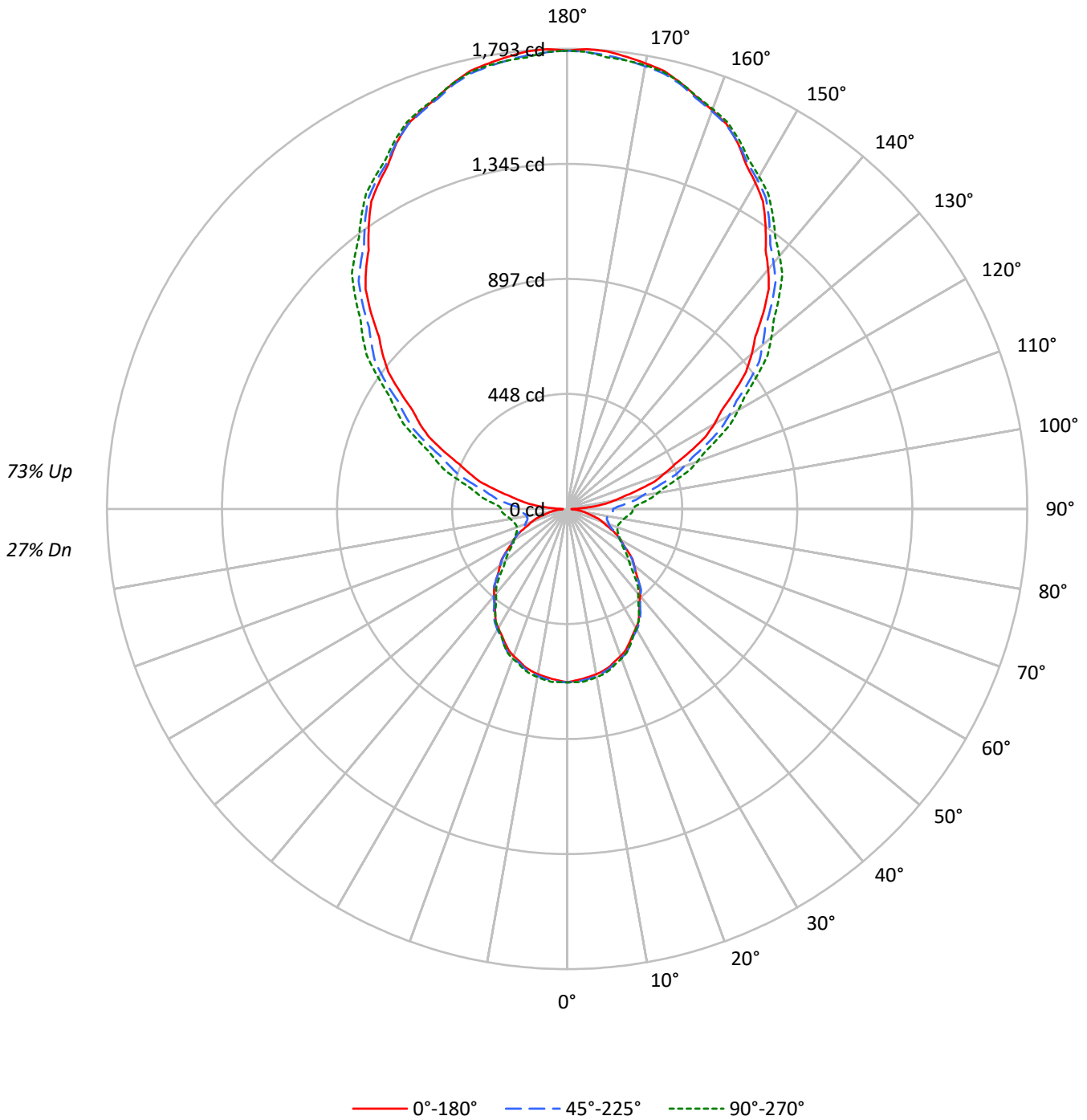
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7015.7 lumens
Efficiency: N/A
Efficacy: 111.5 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-Indirect

Input Watts (W): 62.9
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
RC	80				70				50				30				10
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	102	102	102	102	91	91	91	91	71	71	71	52	52	52	35	35	35
1	92	87	83	80	82	78	75	72	61	58	56	45	43	42	30	29	28
2	83	76	70	65	74	68	63	58	53	49	46	39	37	34	26	25	23
3	76	67	59	54	68	60	54	49	47	42	39	34	31	29	23	21	20
4	69	59	51	45	62	53	46	41	41	36	33	31	27	25	21	19	17
5	64	52	44	38	57	47	40	35	37	32	28	27	24	21	19	16	15
6	59	47	39	33	52	42	35	30	33	28	24	25	21	19	17	15	13
7	54	42	34	29	48	38	31	26	30	25	21	22	19	16	15	13	12
8	50	38	31	25	45	34	28	23	27	22	19	20	17	15	14	12	10
9	46	35	27	22	41	31	25	21	25	20	17	19	15	13	13	11	9
10	43	32	25	20	39	29	22	18	23	18	15	17	14	12	12	10	8

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10908	10908	10908
5°	10702	9631	9332
10°	10561	8593	8061
15°	10407	7697	7051
20°	10168	6906	6167
25°	9850	6147	5374
30°	9540	5470	4665
35°	9116	4833	4004
40°	8723	4200	3394
45°	8266	3612	2832
50°	7785	3096	2324
55°	7272	2596	1971
60°	6787	2169	1717
65°	6184	1848	1569
70°	5608	1613	1515
75°	4906	1535	1563
80°	4098	1597	1689
85°	2989	1805	1909

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 8266 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	63.8	0.9
10°-20°	181.2	2.6
20°-30°	267.8	3.8
30°-40°	308.6	4.4
40°-50°	299.8	4.3
50°-60°	255.8	3.6
60°-70°	204.9	2.9
70°-80°	170.2	2.4
80°-90°	169.3	2.4
90°-100°	233.7	3.3
100°-110°	396.4	5.7
110°-120°	591.5	8.4
120°-130°	767.1	10.9
130°-140°	868.7	12.4
140°-150°	858.4	12.2
150°-160°	726.1	10.3
160°-170°	483.4	6.9
170°-180°	169.1	2.4
0°-30°	512.8	7.3
0°-40°	821.4	11.7
0°-60°	1377.0	19.6
0°-90°	1921.4	27.4
90°-120°	1221.6	17.4
90°-150°	3715.7	53.0
90°-180°	5094.0	72.6
0°-180°	7015.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	676	676	676	676	676	
5°	665	677	671	672	676	63
15°	636	650	642	643	648	179
25°	574	588	582	579	583	265
35°	490	502	498	488	488	307
45°	392	402	391	378	372	302
55°	289	300	286	271	270	259
65°	191	203	201	213	217	190
75°	103	118	160	199	212	110
85°	32	82	174	229	246	34
90°	16	82	178	236	255	13
95°	95	133	230	285	297	97
105°	288	309	382	432	439	307
115°	528	554	601	637	646	525
125°	794	824	864	895	902	712
135°	1081	1105	1126	1155	1168	833
145°	1348	1364	1372	1382	1397	842
155°	1573	1583	1575	1577	1587	723
165°	1718	1725	1712	1706	1718	484
175°	1790	1797	1774	1767	1767	170
180°	1786	1786	1786	1786	1786	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	675.6	675.6	675.6	675.6	675.6
2.5°	669.5	679.2	674.8	674.8	675.6
5°	665.1	677.2	670.8	671.9	676.5
7.5°	659.0	671.7	666.4	665.8	671.2
10°	653.6	664.8	660.3	660.4	665.1
12.5°	646.8	660.2	652.7	654.3	659.0
15°	636.5	649.5	642.2	643.2	647.9
17.5°	621.2	633.1	627.3	627.0	631.7
20°	609.7	620.9	617.4	615.6	620.2
22.5°	596.0	607.9	605.1	601.1	606.5
25°	574.4	587.5	582.1	579.3	583.0
27.5°	553.1	566.6	559.0	553.9	556.7
30°	536.3	548.4	542.9	536.3	539.1
32.5°	517.9	531.5	524.6	517.2	518.5
35°	489.5	502.5	498.1	487.6	487.6
37.5°	462.6	474.9	466.2	456.3	454.2
40°	442.8	455.8	445.6	434.1	431.3
42.5°	422.1	435.2	425.7	411.9	407.6
45°	392.2	401.5	391.2	377.7	372.1
47.5°	361.3	372.2	358.8	343.4	336.6
50°	340.7	350.9	339.7	320.4	313.0
52.5°	320.8	331.0	317.5	299.1	293.9
55°	289.1	300.3	286.2	270.9	270.0
57.5°	259.5	270.5	256.8	251.4	248.9
60°	240.5	250.7	238.5	238.4	237.4
62.5°	219.1	230.8	220.9	227.7	229.7
65°	190.8	202.9	201.2	212.6	217.2
67.5°	164.3	175.4	182.5	203.8	211.6
70°	146.0	157.1	172.5	199.2	208.4
72.5°	129.2	141.1	167.8	198.4	208.4
75°	103.1	117.9	159.9	199.1	212.0
77.5°	80.2	98.7	158.5	203.9	218.2
80°	64.9	90.8	160.7	208.5	224.2
82.5°	51.1	84.5	163.7	216.7	232.5
85°	31.5	82.5	173.8	229.2	245.9
87.5°	17.0	82.8	179.2	235.8	254.5
90°	16.1	82.0	178.4	235.8	255.2
92.5°	45.0	97.5	196.6	252.3	266.6
95°	94.8	132.8	230.5	284.8	296.9
97.5°	146.0	176.2	268.9	320.2	331.7
100°	184.0	208.9	297.7	348.2	357.5
102.5°	225.7	246.2	331.0	378.5	390.0
105°	288.2	308.6	382.0	431.5	438.9
107.5°	357.6	378.9	442.1	489.7	498.4
110°	403.8	428.8	485.3	529.2	539.4



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	453.9	478.9	529.3	571.6	581.8
115°	528.0	553.9	601.0	637.2	646.5
117.5°	605.7	632.0	675.1	710.0	718.9
120°	662.6	686.7	728.9	762.2	769.7
122.5°	712.6	740.4	782.0	815.3	822.7
125°	794.3	824.0	863.5	894.9	902.4
127.5°	878.5	906.3	942.7	974.6	984.3
130°	938.4	962.5	994.3	1027.7	1038.9
132.5°	994.5	1018.6	1046.6	1079.3	1091.9
135°	1080.6	1104.7	1126.1	1154.8	1167.8
137.5°	1162.8	1186.2	1202.6	1225.4	1241.7
140°	1218.9	1239.3	1251.2	1272.4	1287.2
142.5°	1270.5	1290.9	1299.7	1317.9	1332.7
145°	1347.9	1364.5	1372.5	1382.3	1397.1
147.5°	1420.3	1436.6	1440.0	1448.5	1457.8
150°	1467.3	1482.1	1482.4	1486.5	1495.7
152.5°	1511.3	1524.6	1520.4	1522.9	1533.6
155°	1573.4	1582.7	1575.3	1577.4	1586.7
157.5°	1622.7	1632.0	1620.5	1624.0	1631.5
160°	1653.1	1662.3	1649.3	1651.3	1658.8
162.5°	1681.9	1688.2	1676.6	1674.2	1684.5
165°	1717.5	1724.9	1711.8	1706.4	1717.5
167.5°	1747.9	1755.3	1738.0	1732.2	1743.3
170°	1763.0	1770.4	1751.6	1744.3	1755.4
172.5°	1776.7	1784.1	1763.8	1754.9	1763.0
175°	1789.6	1797.0	1774.4	1766.8	1766.8
177.5°	1793.3	1797.8	1781.2	1773.8	1782.7
180°	1785.8	1785.8	1785.8	1785.8	1785.8

(END OF REPORT)