

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: P644275

Luminaire Tested: CRQ4DIP-SR4F0-125D150U935-FLLFLL-1DUDD-WW

Issue Date: 2/20/2023



Test Information

Test Method: LM-79-2019
Report Number: P644275
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-SR4F0-125D150U935-FLLFLL-1DUDD-WW
Description: NEO-RAY CIRQUE SUSPENDED LED LUMINAIRE
DOWNLIGHT - CURVED FROSTED LENS - 1250 LUMENS PER FOOT
UPLIGHT - CURVED FROSTED LENS - 1500 LUMENS PER FOOT
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

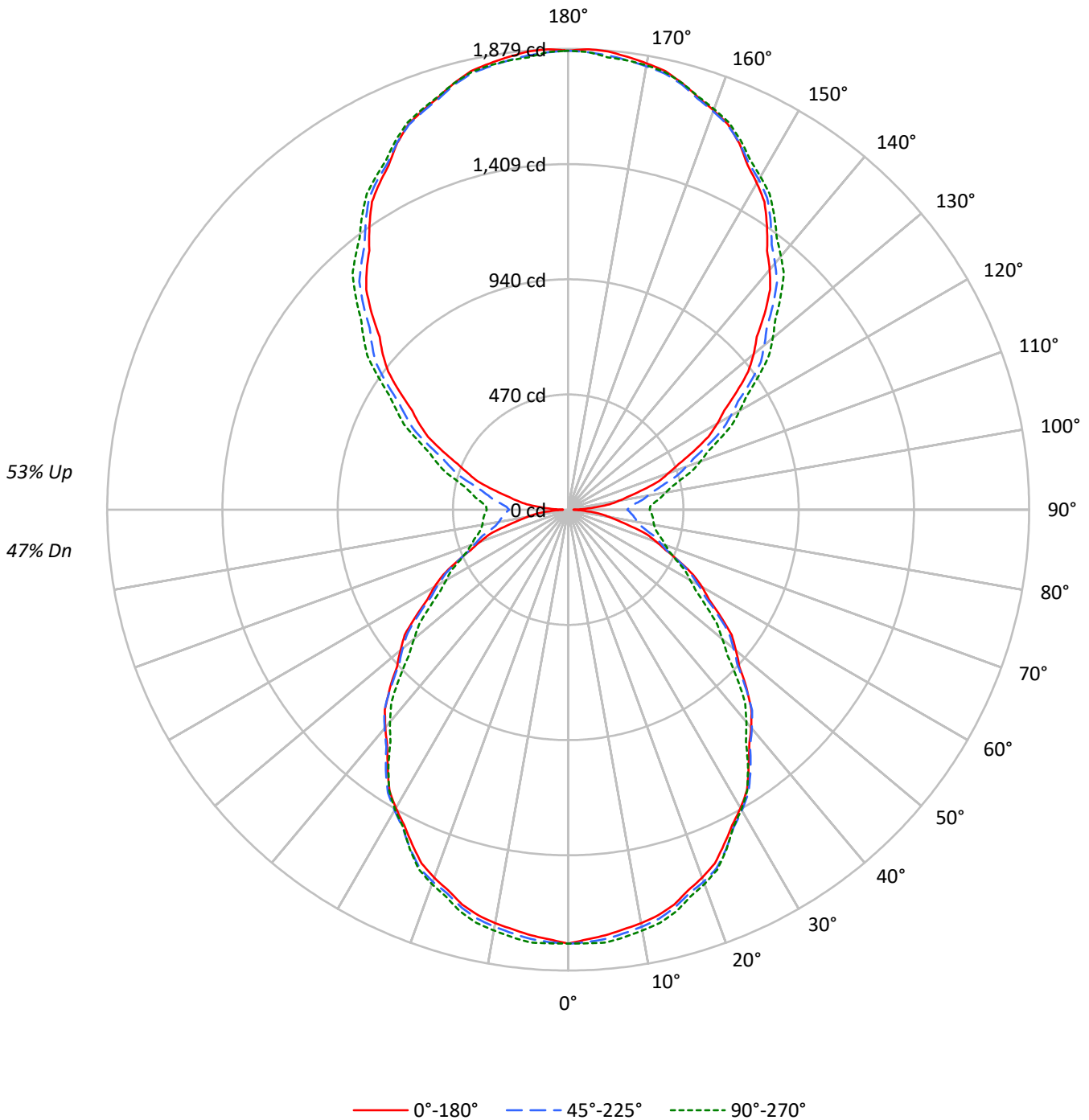
Lumens per Lamp: N/A
Luminaire Lumens: 10088.5 lumens
Efficiency: N/A
Efficacy: 113.9 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.19 / 1.3
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.33')
CIE Type: General Diffuse

Input Watts (W): 88.6
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									50									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	106	106	106	106	98	98	98	98	81	81	81	67	67	67	53	53	53	47						47														
1	96	92	88	84	88	84	81	77	70	68	65	58	56	54	46	44	43	38						38														
2	88	80	74	68	80	74	68	63	61	57	54	50	47	45	40	38	36	31						31														
3	80	70	63	57	73	65	58	53	54	49	45	45	41	38	36	33	31	27						27														
4	73	62	54	48	67	57	50	45	48	43	39	40	36	33	32	29	27	23						23														
5	67	55	47	41	61	51	44	39	43	38	33	36	31	28	29	26	23	20						20														
6	62	50	42	36	57	46	39	33	39	33	29	32	28	25	26	23	21	18						18														
7	57	45	37	31	52	42	34	29	35	30	26	29	25	22	24	21	18	16						16														
8	53	41	33	28	49	38	31	26	32	27	23	27	23	20	22	19	16	14						14														
9	49	37	30	25	45	35	28	23	29	24	20	25	21	18	20	17	15	13						13														
10	46	34	27	22	42	32	25	21	27	22	18	23	19	16	19	16	13	11						11														

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	28568	28568	28568
5°	28028	25224	24441
10°	27660	22468	21113
15°	27254	20121	18468
20°	26630	18051	16152
25°	25798	16099	14075
30°	24983	14266	12217
35°	23876	12569	10486
40°	22843	10972	8890
45°	21648	9432	7418
50°	20386	8027	6085
55°	19048	6745	5009
60°	17772	5571	4153
65°	16200	4567	3507
70°	14689	3751	3059
75°	12843	3192	2798
80°	10727	2851	2674
85°	7828	2748	2687

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 21648 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	167.1	1.7
10°-20°	474.2	4.7
20°-30°	700.3	6.9
30°-40°	805.9	8.0
40°-50°	782.2	7.8
50°-60°	659.9	6.5
60°-70°	497.0	4.9
70°-80°	350.8	3.5
80°-90°	261.2	2.6
90°-100°	278.0	2.8
100°-110°	427.5	4.2
110°-120°	624.0	6.2
120°-130°	805.6	8.0
130°-140°	910.6	9.0
140°-150°	899.6	8.9
150°-160°	760.9	7.5
160°-170°	506.6	5.0
170°-180°	177.2	1.8
0°-30°	1341.5	13.3
0°-40°	2147.4	21.3
0°-60°	3589.4	35.6
0°-90°	4698.5	46.6
90°-120°	1329.5	13.2
90°-150°	3945.3	39.1
90°-180°	5390.0	53.4
0°-180°	10088.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1769	1769	1769	1769	1769	
5°	1742	1774	1757	1760	1772	165
15°	1667	1695	1679	1685	1697	469
25°	1504	1533	1524	1517	1527	693
35°	1282	1307	1296	1277	1277	803
45°	1027	1043	1022	989	975	792
55°	757	775	744	700	686	679
65°	500	514	497	488	486	497
75°	270	285	332	369	380	289
85°	82	146	265	329	346	87
90°	21	115	241	310	332	19
95°	114	153	273	340	355	114
105°	317	330	408	466	476	338
115°	564	585	633	671	680	560
125°	838	867	906	938	946	751
135°	1132	1158	1180	1210	1224	873
145°	1412	1430	1438	1449	1464	882
155°	1649	1659	1651	1653	1663	757
165°	1800	1808	1794	1788	1800	507
175°	1875	1883	1860	1852	1852	178
180°	1872	1872	1872	1872	1872	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1769.4	1769.4	1769.4	1769.4	1769.4
2.5°	1753.4	1778.8	1764.9	1767.4	1769.4
5°	1741.9	1773.6	1756.9	1759.6	1771.9
7.5°	1725.9	1756.7	1742.3	1743.7	1757.9
10°	1711.9	1741.2	1726.4	1729.6	1741.9
12.5°	1693.9	1724.4	1708.8	1713.7	1725.9
15°	1666.9	1695.2	1678.9	1684.7	1696.9
17.5°	1626.9	1655.2	1639.9	1642.2	1654.4
20°	1596.9	1623.3	1613.9	1612.2	1624.4
22.5°	1560.9	1589.3	1581.9	1574.2	1588.4
25°	1504.4	1532.8	1524.4	1517.2	1526.9
27.5°	1448.5	1473.5	1460.4	1450.6	1458.0
30°	1404.5	1430.4	1416.0	1404.7	1412.0
32.5°	1356.5	1383.9	1368.0	1354.6	1358.0
35°	1282.0	1307.4	1295.5	1277.0	1277.0
37.5°	1211.6	1232.0	1218.0	1194.9	1189.6
40°	1159.6	1182.0	1164.1	1136.9	1129.6
42.5°	1105.6	1128.0	1109.7	1078.8	1067.6
45°	1027.1	1042.7	1021.6	989.3	974.6
47.5°	946.2	963.8	935.4	899.3	881.7
50°	892.2	910.2	880.6	839.2	819.7
52.5°	840.2	855.9	825.1	780.9	764.9
55°	757.2	774.8	743.7	700.4	686.2
57.5°	679.8	696.8	663.1	631.4	618.5
60°	629.8	644.9	612.7	585.4	574.1
62.5°	573.8	590.4	561.9	545.4	537.2
65°	499.8	513.9	497.2	488.0	485.5
67.5°	430.3	442.0	436.8	443.4	445.7
70°	382.4	394.0	401.1	417.0	420.8
72.5°	338.4	349.6	372.3	395.8	401.5
75°	269.9	285.4	332.5	369.0	379.6
77.5°	209.9	227.0	302.5	349.5	363.0
80°	169.9	197.1	286.8	339.8	354.9
82.5°	134.0	171.3	275.6	335.3	350.4
85°	82.5	146.2	264.6	328.6	346.1
87.5°	40.3	127.2	252.6	319.7	339.6
90°	21.4	115.4	241.0	310.1	332.0
92.5°	56.4	124.6	250.4	317.8	335.4
95°	114.4	152.7	273.0	340.5	354.6
97.5°	171.0	193.6	304.6	367.1	380.9
100°	210.8	226.7	330.0	390.4	403.1
102.5°	253.3	264.5	360.1	417.4	431.2
105°	317.0	329.6	407.8	465.8	476.5
107.5°	387.9	401.7	467.5	521.6	532.2
110°	435.2	454.1	511.6	560.6	572.7



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	487.7	506.5	557.7	602.7	614.8
115°	563.8	585.1	632.8	670.8	680.5
117.5°	643.5	666.9	710.2	745.2	754.6
120°	701.9	724.2	765.4	798.8	806.6
122.5°	754.3	779.3	821.0	854.5	862.2
125°	838.4	866.6	906.4	937.9	945.7
127.5°	924.8	952.8	989.5	1021.4	1031.5
130°	986.4	1011.7	1043.5	1077.1	1088.7
132.5°	1042.8	1068.1	1097.2	1131.1	1144.3
135°	1132.4	1157.7	1180.1	1210.2	1223.8
137.5°	1218.6	1243.1	1260.4	1284.2	1301.3
140°	1277.4	1298.8	1311.2	1333.4	1349.0
142.5°	1331.5	1352.8	1362.1	1381.1	1396.6
145°	1412.5	1430.0	1438.4	1448.7	1464.2
147.5°	1488.4	1505.5	1509.1	1518.1	1527.8
150°	1537.7	1553.2	1553.6	1557.8	1567.5
152.5°	1583.8	1597.8	1593.3	1596.0	1607.2
155°	1649.0	1658.7	1650.9	1653.1	1662.9
157.5°	1700.6	1710.3	1698.2	1702.0	1709.7
160°	1732.4	1742.1	1728.4	1730.6	1738.4
162.5°	1762.6	1769.2	1757.0	1754.5	1765.4
165°	1799.9	1807.7	1794.0	1788.3	1799.9
167.5°	1831.7	1839.5	1821.4	1815.3	1827.0
170°	1847.6	1855.4	1835.7	1828.0	1839.7
172.5°	1861.9	1869.7	1848.4	1839.1	1847.6
175°	1875.4	1883.2	1859.5	1851.6	1851.6
177.5°	1879.4	1884.1	1866.7	1859.0	1868.3
180°	1871.5	1871.5	1871.5	1871.5	1871.5

(END OF REPORT)