

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: P644185

Luminaire Tested: CRQ4DIP-SR4F0-100D125U835-FLLFLL-1DUDD-WW

Issue Date: 2/20/2023



Test Information

Test Method: LM-79-2019
Report Number: P644185
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-SR4F0-100D125U835-FLLFLL-1DUDD-WW
Description: NEO-RAY CIRQUE SUSPENDED LED LUMINAIRE
DOWNLIGHT - CURVED FROSTED LENS - 1000 LUMENS PER FOOT
UPLIGHT - CURVED FROSTED LENS - 1250 LUMENS PER FOOT
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

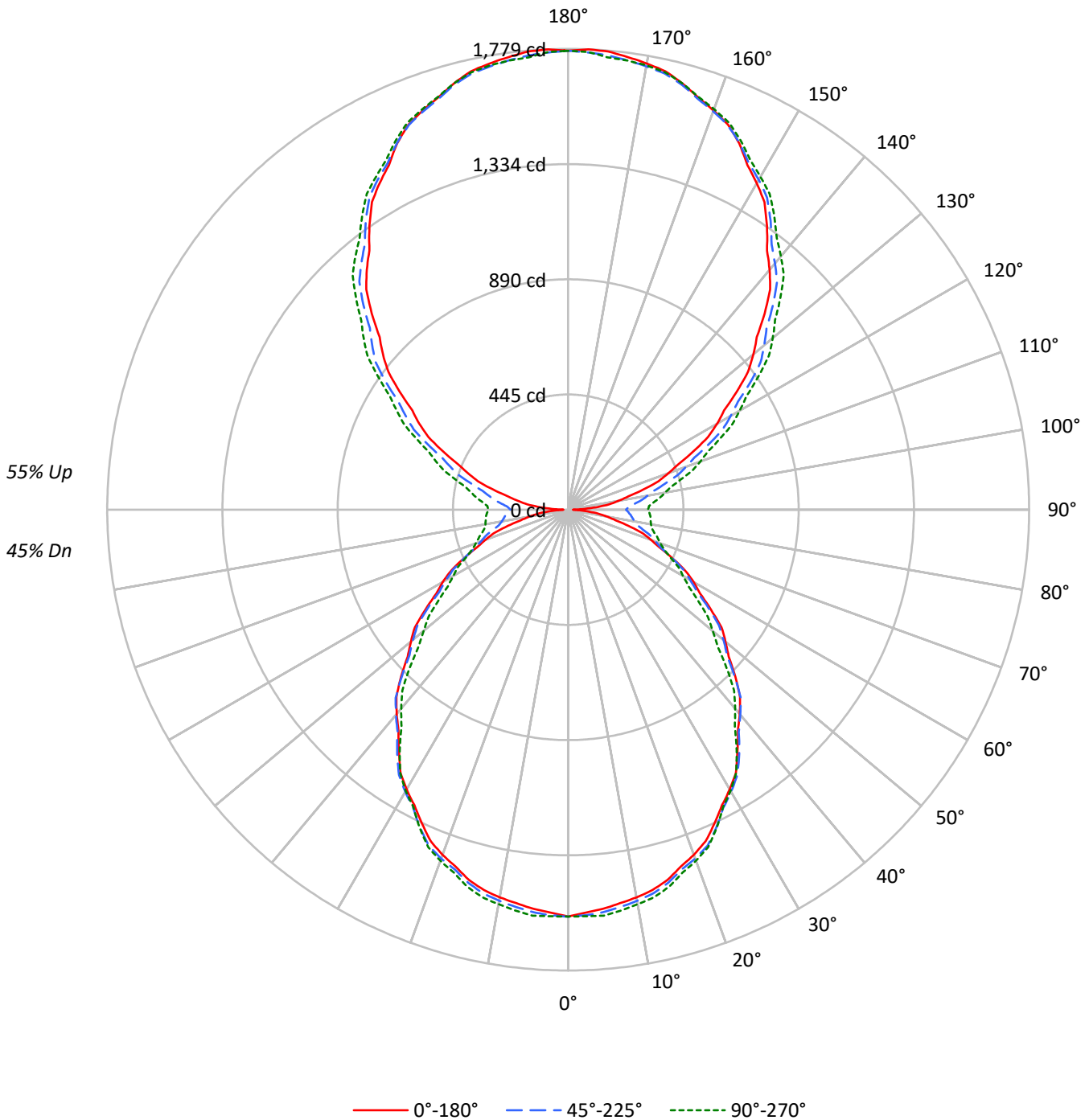
Lumens per Lamp: N/A
Luminaire Lumens: 9281.4 lumens
Efficiency: N/A
Efficacy: 136.3 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.19 / 1.3
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.33')
CIE Type: General Diffuse

Input Watts (W): 68.1
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	50	30	10	0	
RCR																						
0	106	106	106	106	97	97	97	97	81	81	81	65	65	65	52	52	52	45				
1	96	91	87	84	88	84	80	77	70	67	65	57	55	53	44	43	42	37				
2	87	80	73	68	80	73	68	63	61	57	53	49	47	44	39	37	35	30				
3	80	70	63	57	73	64	58	53	54	49	45	44	40	37	35	32	30	26				
4	73	62	54	48	66	57	50	45	48	42	38	39	35	32	31	28	26	22				
5	67	55	47	41	61	51	44	38	43	37	33	35	31	28	28	25	23	19				
6	62	49	41	36	56	46	38	33	38	33	29	32	27	24	25	22	20	17				
7	57	45	37	31	52	41	34	29	35	29	25	29	25	21	23	20	18	15				
8	53	41	33	27	48	38	31	26	32	26	22	26	22	19	21	18	16	13				
9	49	37	30	24	45	34	28	23	29	24	20	24	20	17	20	17	14	12				
10	46	34	27	22	42	31	25	21	27	22	18	22	18	16	18	15	13	11				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	25362	25362	25362
5°	24882	22393	21698
10°	24555	19947	18743
15°	24195	17864	16394
20°	23642	16027	14340
25°	22904	14292	12496
30°	22180	12667	10846
35°	21196	11162	9309
40°	20279	9741	7892
45°	19218	8375	6586
50°	18097	7130	5402
55°	16910	5990	4453
60°	15777	4950	3700
65°	14381	4066	3137
70°	13037	3349	2751
75°	11401	2867	2535
80°	9528	2583	2442
85°	6945	2517	2477

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	1.6
10°-20°	421.0	4.5
20°-30°	621.7	6.7
30°-40°	715.5	7.7
40°-50°	694.5	7.5
50°-60°	586.2	6.3
60°-70°	442.8	4.8
70°-80°	315.2	3.4
80°-90°	239.1	2.6
90°-100°	259.9	2.8
100°-110°	403.5	4.3
110°-120°	590.3	6.4
120°-130°	762.4	8.2
130°-140°	861.9	9.3
140°-150°	851.5	9.2
150°-160°	720.3	7.8
160°-170°	479.6	5.2
170°-180°	167.7	1.8
0°-30°	1191.0	12.8
0°-40°	1906.5	20.5
0°-60°	3187.2	34.3
0°-90°	4184.3	45.1
90°-120°	1253.7	13.5
90°-150°	3729.6	40.2
90°-180°	5097.0	54.9
0°-180°	9281.4	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	1505	1491	1496	1506	416
25°	1336	1361	1353	1347	1356	615
35°	1138	1161	1150	1134	1134	713
45°	912	926	907	878	865	703
55°	672	688	660	622	610	603
65°	444	457	443	436	434	441
75°	240	254	299	334	344	256
85°	73	132	242	302	319	78
90°	20	106	223	287	308	18
95°	107	143	255	318	331	107
105°	299	311	385	440	449	318
115°	533	553	599	635	644	529
125°	793	820	858	888	895	711
135°	1072	1096	1117	1146	1158	826
145°	1337	1354	1362	1371	1386	835
155°	1561	1570	1563	1565	1574	717
165°	1704	1711	1698	1693	1704	480
175°	1775	1783	1760	1753	1753	168
180°	1772	1772	1772	1772	1772	



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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	1566.9	1569.0	1570.8
5°	1546.4	1574.6	1559.7	1562.1	1573.0
7.5°	1532.2	1559.7	1546.9	1548.0	1560.6
10°	1519.7	1545.8	1532.7	1535.5	1546.4
12.5°	1503.8	1531.0	1517.0	1521.3	1532.2
15°	1479.8	1505.2	1490.6	1495.6	1506.4
17.5°	1444.3	1469.6	1456.0	1457.9	1468.7
20°	1417.7	1441.2	1432.9	1431.2	1442.1
22.5°	1385.7	1411.0	1404.5	1397.6	1410.1
25°	1335.6	1361.0	1353.3	1346.9	1355.6
27.5°	1285.9	1308.6	1296.6	1287.8	1294.3
30°	1246.9	1270.1	1257.3	1247.0	1253.5
32.5°	1204.3	1228.9	1214.7	1202.5	1205.6
35°	1138.1	1161.0	1150.4	1133.7	1133.7
37.5°	1075.6	1094.2	1081.5	1060.8	1056.1
40°	1029.4	1049.8	1033.5	1009.3	1002.8
42.5°	981.5	1001.9	985.3	957.8	947.8
45°	911.8	926.0	907.1	878.3	865.3
47.5°	840.0	856.1	830.6	798.3	782.7
50°	792.0	808.4	782.2	745.1	727.7
52.5°	745.9	760.3	732.7	693.4	679.2
55°	672.2	688.3	660.5	622.1	610.0
57.5°	603.5	619.1	589.1	561.6	550.4
60°	559.1	573.0	544.4	521.2	511.5
62.5°	509.4	524.7	499.5	486.2	479.5
65°	443.7	456.9	442.6	435.9	434.3
67.5°	382.0	393.1	389.4	397.2	399.9
70°	339.4	350.5	358.1	374.3	378.5
72.5°	300.4	311.2	333.1	356.2	362.1
75°	239.6	254.3	298.6	333.5	343.9
77.5°	186.4	202.8	273.0	317.5	330.4
80°	150.9	176.6	259.9	309.8	324.2
82.5°	118.9	154.0	250.6	306.8	321.2
85°	73.2	132.5	242.4	302.4	319.0
87.5°	35.9	116.4	232.7	295.5	314.3
90°	19.8	106.3	222.8	287.3	307.9
92.5°	52.5	115.8	232.7	295.6	312.0
95°	106.8	143.3	255.3	318.2	331.4
97.5°	160.1	182.4	286.1	344.4	357.3
100°	197.8	213.8	310.6	367.1	378.8
102.5°	238.1	249.8	339.6	393.1	406.0
105°	298.6	311.4	385.3	439.6	449.4
107.5°	365.9	379.8	442.1	492.9	502.8
110°	410.8	429.4	484.0	530.0	541.4



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	460.4	479.0	527.6	570.1	581.5
115°	532.7	553.4	598.7	634.6	643.8
117.5°	608.3	630.9	672.0	705.3	714.1
120°	663.7	685.1	724.4	756.2	763.5
122.5°	713.3	737.4	777.0	808.8	816.2
125°	793.1	820.0	857.9	887.8	895.2
127.5°	875.0	901.6	936.5	966.8	976.4
130°	933.4	957.3	987.6	1019.5	1030.6
132.5°	987.1	1011.0	1038.5	1070.7	1083.2
135°	1071.9	1095.8	1117.1	1145.6	1158.4
137.5°	1153.5	1176.7	1193.0	1215.6	1231.8
140°	1209.2	1229.4	1241.2	1262.2	1276.9
142.5°	1260.4	1280.6	1289.3	1307.3	1322.0
145°	1337.1	1353.6	1361.5	1371.3	1386.0
147.5°	1408.9	1425.1	1428.5	1437.0	1446.2
150°	1455.6	1470.3	1470.6	1474.6	1483.8
152.5°	1499.2	1512.4	1508.2	1510.7	1521.4
155°	1560.9	1570.1	1562.8	1564.8	1574.0
157.5°	1609.8	1619.0	1607.5	1611.1	1618.4
160°	1639.9	1649.0	1636.1	1638.1	1645.5
162.5°	1668.4	1674.7	1663.2	1660.8	1671.1
165°	1703.8	1711.1	1698.2	1692.8	1703.8
167.5°	1733.9	1741.2	1724.1	1718.3	1729.4
170°	1748.9	1756.3	1737.6	1730.4	1741.4
172.5°	1762.5	1769.8	1749.7	1740.8	1748.9
175°	1775.3	1782.6	1760.2	1752.7	1752.7
177.5°	1779.0	1783.4	1767.0	1759.7	1768.5
180°	1771.5	1771.5	1771.5	1771.5	1771.5

(END OF REPORT)