

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: P644257

Luminaire Tested: CRQ4DIP-SR4F0-125D125U835-FLLFLL-1DUDD-WW

Issue Date: 2/20/2023



**Test Information**

Test Method: LM-79-2019  
Report Number: P644257  
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-SR4F0-125D125U835-FLLFLL-1DUDD-WW  
Description: NEO-RAY CIRQUE SUSPENDED LED LUMINAIRE  
DOWNLIGHT - CURVED FROSTED LENS - 1250 LUMENS PER FOOT  
UPLIGHT - CURVED FROSTED LENS - 1250 LUMENS PER FOOT  
Light Source: 3500K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

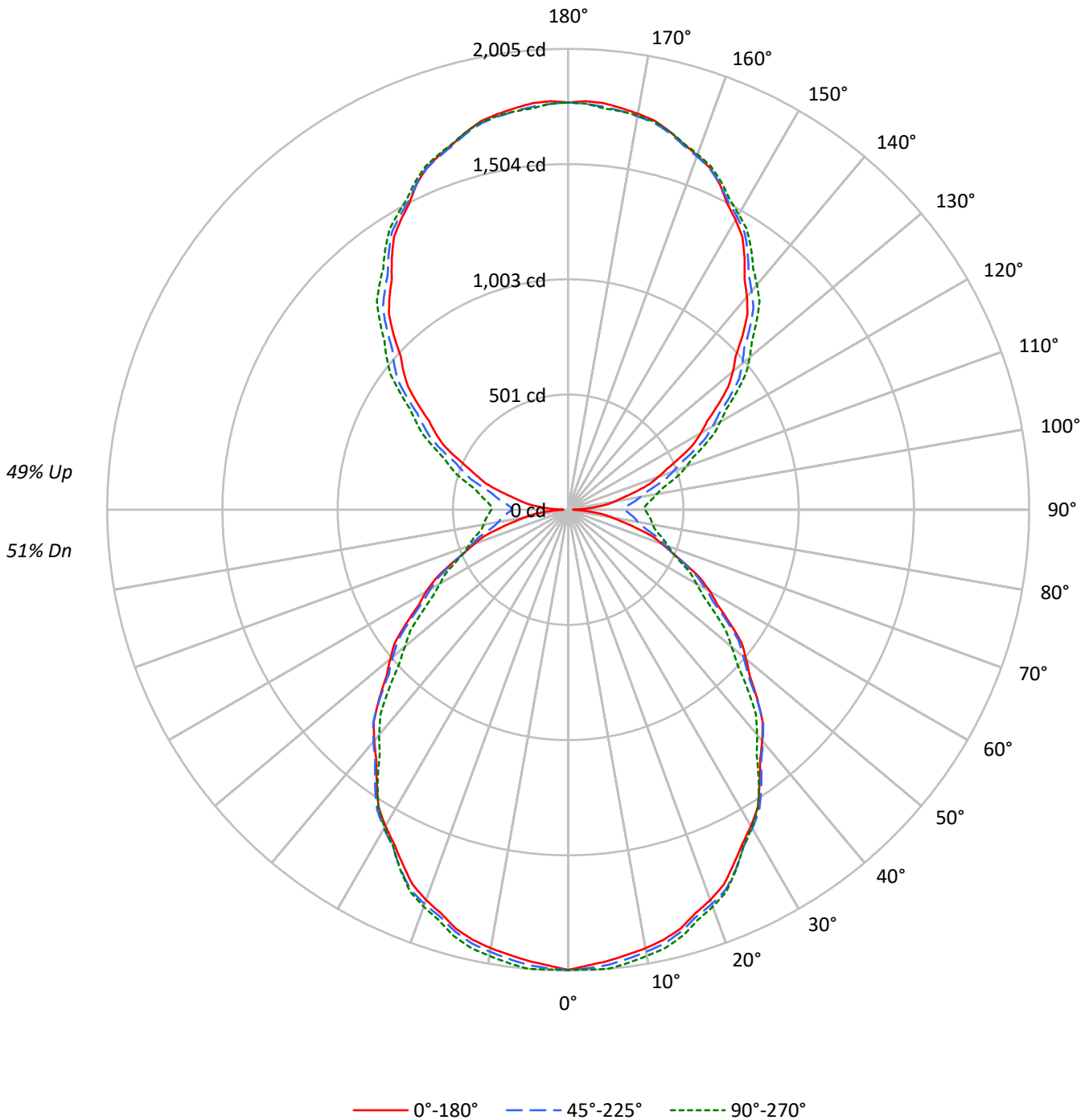
Lumens per Lamp: N/A  
Luminaire Lumens: 10393.9 lumens  
Efficiency: N/A  
Efficacy: 132.9 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.19 / 1.3  
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.33')  
CIE Type: General Diffuse

Input Watts (W): 78.2  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): 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	107	107	107	107	99	99	99	99	84	84	84	70	70	70	57	57	57	51						51														
1	97	93	89	85	90	86	82	79	72	70	67	60	58	57	49	48	47	41						41														
2	88	81	74	69	81	75	69	64	63	59	56	53	50	47	43	41	39	34						34														
3	81	71	64	58	74	66	59	54	56	51	47	47	43	40	38	36	33	29						29														
4	74	63	55	49	68	58	51	46	50	44	40	42	38	34	34	31	29	25						25														
5	68	56	48	42	62	52	45	39	45	39	34	37	33	30	31	28	25	22						22														
6	63	50	42	36	58	47	40	34	40	34	30	34	29	26	28	25	22	19						19														
7	58	45	37	32	53	42	35	30	36	31	27	31	26	23	26	22	20	17						17														
8	54	41	34	28	49	39	32	27	33	28	24	28	24	21	24	20	18	15						15														
9	50	38	30	25	46	35	28	24	31	25	21	26	22	19	22	18	16	14						14														
10	47	35	27	23	43	32	26	21	28	23	19	24	20	17	20	17	15	13						13														

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	32329	32329	32329
5°	31717	28545	27658
10°	31302	25421	23892
15°	30843	22766	20899
20°	30137	20424	18279
25°	29195	18219	15929
30°	28272	16137	13826
35°	27019	14214	11867
40°	25850	12414	10060
45°	24500	10671	8395
50°	23069	9074	6886
55°	21556	7626	5649
60°	20111	6291	4657
65°	18332	5135	3894
70°	16621	4187	3349
75°	14532	3510	3006
80°	12142	3061	2809
85°	8852	2865	2755

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 24500 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	189.1	1.8
10°-20°	536.6	5.2
20°-30°	792.3	7.6
30°-40°	911.7	8.8
40°-50°	884.8	8.5
50°-60°	745.5	7.2
60°-70°	557.6	5.4
70°-80°	385.3	3.7
80°-90°	273.1	2.6
90°-100°	273.4	2.6
100°-110°	408.4	3.9
110°-120°	592.0	5.7
120°-130°	763.1	7.3
130°-140°	862.0	8.3
140°-150°	851.5	8.2
150°-160°	720.3	6.9
160°-170°	479.6	4.6
170°-180°	167.7	1.6
0°-30°	1518.0	14.6
0°-40°	2429.7	23.4
0°-60°	4059.9	39.1
0°-90°	5276.0	50.8
90°-120°	1273.8	12.3
90°-150°	3750.4	36.1
90°-180°	5118.0	49.2
0°-180°	10393.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2002	2002	2002	2002	2002	
5°	1971	2007	1988	1991	2005	187
15°	1886	1918	1900	1906	1920	531
25°	1702	1734	1725	1717	1728	784
35°	1451	1478	1465	1445	1445	908
45°	1162	1179	1156	1120	1103	896
55°	857	875	841	792	774	768
65°	566	579	559	544	539	563
75°	305	320	366	399	408	327
85°	93	157	276	338	355	99
90°	22	118	245	313	334	20
95°	113	149	268	335	349	112
105°	305	314	388	445	456	325
115°	537	555	600	636	645	533
125°	796	821	858	888	895	713
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°	2002.3	2002.3	2002.3	2002.3	2002.3
2.5°	1984.2	2013.0	1997.0	2000.1	2002.3
5°	1971.2	2007.2	1988.2	1991.3	2005.1
7.5°	1953.1	1987.8	1971.4	1973.3	1989.3
10°	1937.3	1970.4	1953.3	1957.4	1971.2
12.5°	1916.9	1950.8	1933.7	1939.3	1953.1
15°	1886.4	1917.7	1899.6	1906.5	1920.3
17.5°	1841.1	1872.8	1855.4	1858.4	1872.2
20°	1807.2	1836.7	1826.0	1824.5	1838.3
22.5°	1766.4	1798.2	1789.8	1781.5	1797.6
25°	1702.5	1733.9	1725.2	1716.9	1728.0
27.5°	1639.2	1666.3	1652.2	1641.6	1649.9
30°	1589.4	1618.0	1601.7	1589.6	1597.9
32.5°	1535.1	1565.1	1547.4	1532.9	1536.8
35°	1450.8	1478.5	1465.0	1445.2	1445.2
37.5°	1371.1	1392.8	1378.0	1352.3	1346.2
40°	1312.2	1336.2	1317.0	1286.6	1278.3
42.5°	1251.2	1275.1	1255.1	1220.9	1208.2
45°	1162.4	1178.9	1155.8	1119.6	1103.0
47.5°	1070.7	1089.3	1058.1	1017.7	997.8
50°	1009.6	1029.0	995.5	949.7	927.6
52.5°	950.8	967.2	932.9	883.5	865.0
55°	856.9	875.3	840.9	791.5	773.9
57.5°	769.2	787.1	749.2	711.2	695.9
60°	712.7	728.3	691.9	657.6	643.8
62.5°	649.3	666.5	633.8	610.9	600.0
65°	565.6	579.4	559.0	543.7	539.1
67.5°	487.0	498.0	489.2	490.6	491.0
70°	432.7	443.7	447.7	459.0	460.8
72.5°	382.9	393.2	413.0	432.6	436.6
75°	305.4	320.1	365.6	398.7	407.9
77.5°	237.6	253.0	328.4	372.7	385.0
80°	192.3	218.1	308.0	359.2	372.9
82.5°	151.6	187.6	292.9	350.8	364.6
85°	93.3	156.8	275.9	338.4	354.9
87.5°	45.1	132.9	259.1	325.0	343.9
90°	21.6	118.3	244.7	313.0	334.1
92.5°	56.3	124.9	250.7	317.3	334.8
95°	112.9	148.8	268.1	335.3	349.1
97.5°	167.5	186.0	295.4	357.2	370.8
100°	205.1	217.0	317.9	377.5	390.4
102.5°	244.9	252.4	345.0	401.5	415.2
105°	304.7	313.9	388.4	445.1	456.1
107.5°	371.3	381.7	443.8	496.4	506.9
110°	415.7	431.3	485.2	532.5	544.5



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	465.3	480.9	528.8	571.6	583.6
115°	537.0	555.3	599.9	635.9	645.0
117.5°	611.8	632.7	673.1	705.8	714.6
120°	666.7	686.9	725.0	756.2	763.5
122.5°	716.3	738.8	777.6	808.8	816.2
125°	795.5	821.2	858.5	887.8	895.2
127.5°	876.7	902.8	937.1	966.8	976.4
130°	934.7	958.6	988.2	1019.5	1030.6
132.5°	987.3	1011.2	1038.6	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)