

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: P644277

Luminaire Tested: CRQ4DIP-SR4F0-125D150U940-FLLFLL-1DUDD-WW

Issue Date: 2/20/2023



Test Information

Test Method: LM-79-2019
Report Number: P644277
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-SR4F0-125D150U940-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: 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

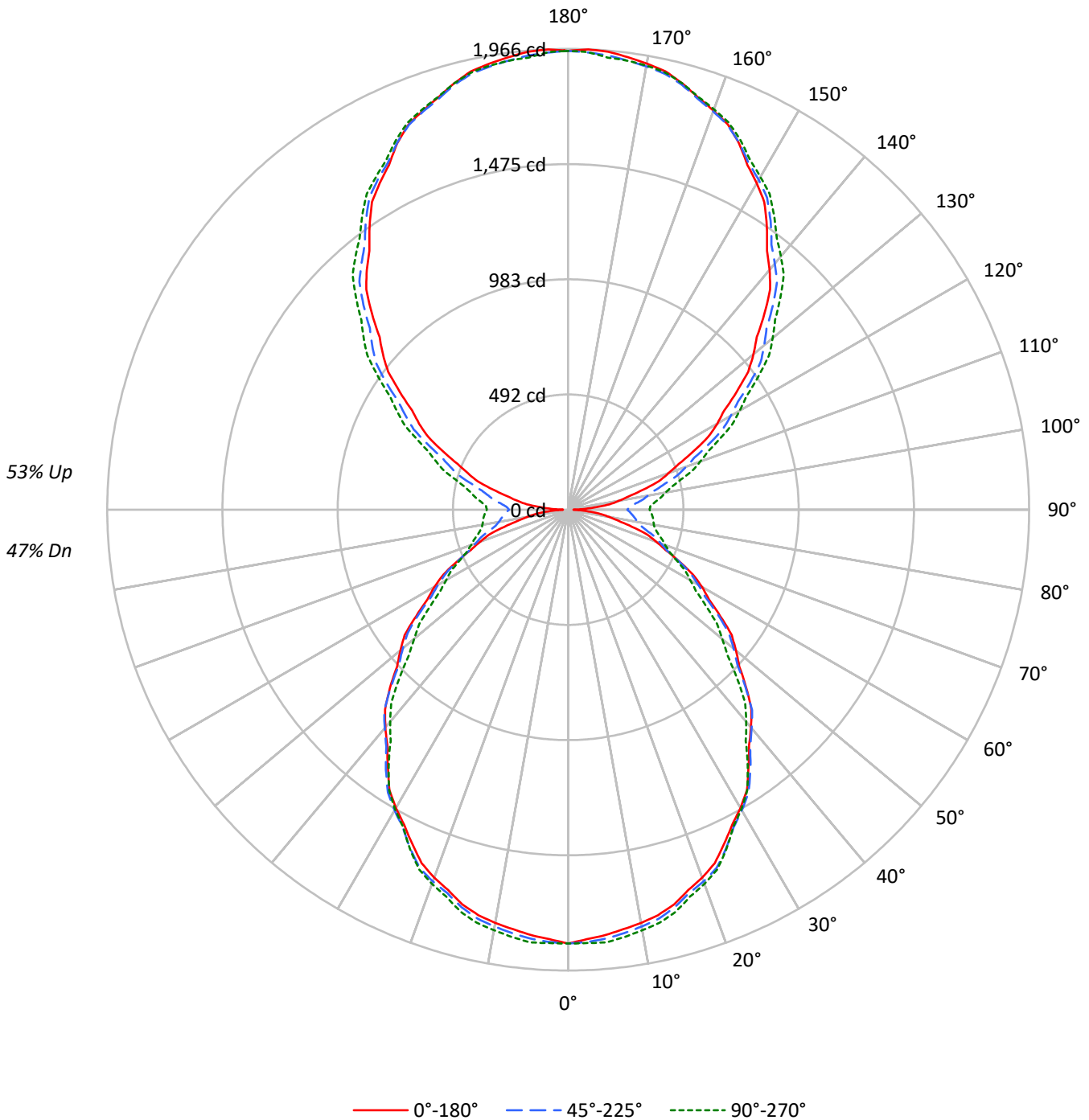
Lumens per Lamp: N/A
Luminaire Lumens: 10551.1 lumens
Efficiency: N/A
Efficacy: 119.1 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.19 / 1.3
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.33')
CIE Type: General Diffuse

Input Watts (W): 88.6
Input Voltage (V): 120
Input Current (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	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	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°	29878	29878	29878
5°	29312	26380	25561
10°	28928	23497	22080
15°	28504	21043	19314
20°	27851	18879	16893
25°	26982	16837	14721
30°	26128	14920	12777
35°	24971	13146	10967
40°	23889	11475	9297
45°	22641	9865	7758
50°	21321	8395	6364
55°	19921	7054	5238
60°	18585	5826	4343
65°	16942	4777	3667
70°	15361	3923	3199
75°	13433	3339	2926
80°	11220	2982	2796
85°	8188	2874	2811

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 22641 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	174.7	1.7
10°-20°	495.9	4.7
20°-30°	732.4	6.9
30°-40°	842.8	8.0
40°-50°	818.0	7.8
50°-60°	690.1	6.5
60°-70°	519.8	4.9
70°-80°	366.9	3.5
80°-90°	273.2	2.6
90°-100°	290.8	2.8
100°-110°	447.1	4.2
110°-120°	652.7	6.2
120°-130°	842.6	8.0
130°-140°	952.3	9.0
140°-150°	940.8	8.9
150°-160°	795.8	7.5
160°-170°	529.8	5.0
170°-180°	185.3	1.8
0°-30°	1403.0	13.3
0°-40°	2245.8	21.3
0°-60°	3754.0	35.6
0°-90°	4913.9	46.6
90°-120°	1390.5	13.2
90°-150°	4126.2	39.1
90°-180°	5637.0	53.4
0°-180°	10551.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1850	1850	1850	1850	1850	
5°	1822	1855	1837	1840	1853	173
15°	1743	1773	1756	1762	1775	490
25°	1573	1603	1594	1587	1597	725
35°	1341	1367	1355	1336	1336	840
45°	1074	1090	1068	1035	1019	828
55°	792	810	778	732	718	710
65°	523	538	520	510	508	520
75°	282	298	348	386	397	302
85°	86	153	277	344	362	91
90°	22	121	252	324	347	20
95°	120	160	286	356	371	119
105°	332	345	426	487	498	353
115°	590	612	662	702	712	586
125°	877	906	948	981	989	786
135°	1184	1211	1234	1266	1280	913
145°	1477	1496	1504	1515	1531	923
155°	1725	1735	1727	1729	1739	792
165°	1882	1891	1876	1870	1882	531
175°	1961	1970	1945	1936	1936	186
180°	1957	1957	1957	1957	1957	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1850.5	1850.5	1850.5	1850.5	1850.5
2.5°	1833.7	1860.3	1845.9	1848.4	1850.5
5°	1821.7	1854.9	1837.4	1840.3	1853.1
7.5°	1805.0	1837.3	1822.2	1823.6	1838.5
10°	1790.4	1821.0	1805.5	1808.9	1821.7
12.5°	1771.5	1803.4	1787.1	1792.2	1805.0
15°	1743.3	1772.9	1755.8	1761.9	1774.7
17.5°	1701.5	1731.1	1715.1	1717.5	1730.2
20°	1670.1	1697.7	1687.9	1686.1	1698.9
22.5°	1632.5	1662.1	1654.4	1646.4	1661.2
25°	1573.4	1603.0	1594.3	1586.7	1597.0
27.5°	1514.9	1541.1	1527.3	1517.1	1524.8
30°	1468.9	1495.9	1480.9	1469.1	1476.7
32.5°	1418.7	1447.4	1430.7	1416.7	1420.3
35°	1340.8	1367.4	1354.9	1335.6	1335.6
37.5°	1267.1	1288.5	1273.9	1249.7	1244.1
40°	1212.7	1236.2	1217.4	1189.0	1181.4
42.5°	1156.3	1179.7	1160.5	1128.3	1116.6
45°	1074.2	1090.5	1068.5	1034.7	1019.3
47.5°	989.5	1008.0	978.3	940.5	922.1
50°	933.1	952.0	921.0	877.7	857.3
52.5°	878.7	895.1	862.9	816.7	800.0
55°	791.9	810.3	777.8	732.5	717.6
57.5°	710.9	728.8	693.5	660.3	646.9
60°	658.6	674.4	640.8	612.2	600.4
62.5°	600.1	617.5	587.7	570.4	561.9
65°	522.7	537.5	520.0	510.3	507.7
67.5°	450.1	462.3	456.8	463.7	466.1
70°	399.9	412.1	419.5	436.1	440.1
72.5°	353.9	365.7	389.3	413.9	420.0
75°	282.3	298.5	347.8	385.9	397.0
77.5°	219.5	237.4	316.4	365.5	379.6
80°	177.7	206.2	300.0	355.4	371.2
82.5°	140.1	179.1	288.2	350.7	366.4
85°	86.3	152.9	276.7	343.7	362.0
87.5°	42.1	133.0	264.2	334.3	355.2
90°	22.4	120.7	252.0	324.3	347.2
92.5°	59.0	130.4	261.9	332.4	350.8
95°	119.6	159.7	285.5	356.1	370.8
97.5°	178.9	202.5	318.6	383.9	398.4
100°	220.4	237.1	345.1	408.3	421.6
102.5°	264.9	276.7	376.6	436.6	451.0
105°	331.6	344.7	426.5	487.1	498.3
107.5°	405.7	420.2	488.9	545.6	556.6
110°	455.2	474.9	535.1	586.3	599.0



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	510.0	529.7	583.3	630.3	643.0
115°	589.7	612.0	661.8	701.5	711.7
117.5°	673.0	697.5	742.7	779.4	789.2
120°	734.1	757.4	800.5	835.5	843.6
122.5°	788.9	815.1	858.7	893.6	901.8
125°	876.9	906.3	948.0	980.9	989.0
127.5°	967.3	996.5	1034.9	1068.2	1078.8
130°	1031.6	1058.1	1091.4	1126.4	1138.6
132.5°	1090.6	1117.0	1147.5	1183.0	1196.8
135°	1184.3	1210.7	1234.2	1265.7	1279.9
137.5°	1274.5	1300.1	1318.1	1343.1	1360.9
140°	1336.0	1358.4	1371.3	1394.6	1410.8
142.5°	1392.5	1414.9	1424.5	1444.4	1460.7
145°	1477.3	1495.6	1504.3	1515.1	1531.3
147.5°	1556.7	1574.5	1578.3	1587.7	1597.8
150°	1608.2	1624.5	1624.8	1629.2	1639.4
152.5°	1656.4	1671.0	1666.4	1669.1	1680.9
155°	1724.6	1734.7	1726.6	1728.9	1739.1
157.5°	1778.6	1788.7	1776.1	1780.0	1788.1
160°	1811.8	1822.0	1807.7	1809.9	1818.1
162.5°	1843.4	1850.3	1837.6	1834.9	1846.3
165°	1882.5	1890.6	1876.2	1870.3	1882.5
167.5°	1915.7	1923.8	1904.9	1898.5	1910.7
170°	1932.3	1940.5	1919.9	1911.8	1924.0
172.5°	1947.3	1955.4	1933.2	1923.4	1932.3
175°	1961.4	1969.5	1944.8	1936.5	1936.5
177.5°	1965.6	1970.5	1952.3	1944.2	1953.9
180°	1957.3	1957.3	1957.3	1957.3	1957.3

(END OF REPORT)