

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: P644273

Luminaire Tested: CRQ4DIP-SR4F0-125D150U930-FLLFLL-1DUDD-WW

Issue Date: 2/20/2023



Test Information

Test Method: LM-79-2019
Report Number: P644273
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-SR4F0-125D150U930-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: 3000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

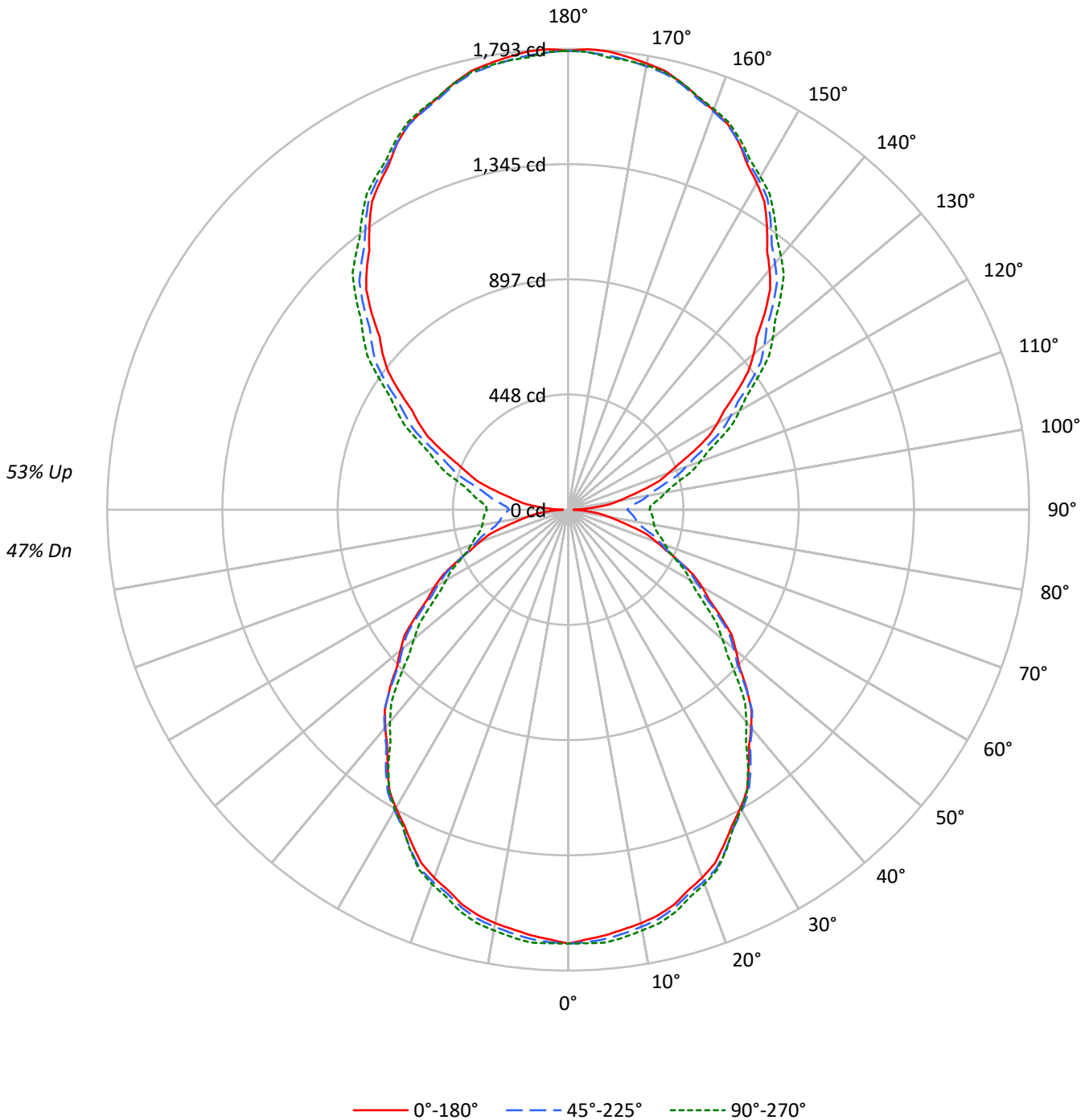
Lumens per Lamp: N/A
Luminaire Lumens: 9626.6 lumens
Efficiency: N/A
Efficacy: 108.7 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.19 / 1.3
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.33')
CIE Type: General Diffuse

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					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°	27259	27259	27259
5°	26744	24068	23321
10°	26393	21439	20146
15°	26007	19200	17622
20°	25411	17225	15413
25°	24619	15361	13431
30°	23839	13612	11658
35°	22782	11994	10006
40°	21797	10470	8483
45°	20658	9000	7078
50°	19452	7660	5807
55°	18175	6435	4779
60°	16957	5316	3963
65°	15457	4358	3346
70°	14017	3580	2918
75°	12253	3046	2670
80°	10241	2720	2551
85°	7467	2622	2564

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 20658 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	159.4	1.7
10°-20°	452.5	4.7
20°-30°	668.2	6.9
30°-40°	769.0	8.0
40°-50°	746.3	7.8
50°-60°	629.6	6.5
60°-70°	474.3	4.9
70°-80°	334.8	3.5
80°-90°	249.3	2.6
90°-100°	265.3	2.8
100°-110°	407.9	4.2
110°-120°	595.5	6.2
120°-130°	768.7	8.0
130°-140°	868.9	9.0
140°-150°	858.4	8.9
150°-160°	726.1	7.5
160°-170°	483.4	5.0
170°-180°	169.1	1.8
0°-30°	1280.1	13.3
0°-40°	2049.1	21.3
0°-60°	3425.1	35.6
0°-90°	4483.4	46.6
90°-120°	1268.6	13.2
90°-150°	3764.7	39.1
90°-180°	5143.0	53.4
0°-180°	9626.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1688	1688	1688	1688	1688	
5°	1662	1692	1676	1679	1691	158
15°	1591	1618	1602	1608	1619	447
25°	1436	1463	1455	1448	1457	661
35°	1223	1248	1236	1219	1219	766
45°	980	995	975	944	930	755
55°	722	739	710	668	655	648
65°	477	490	474	466	463	474
75°	258	272	317	352	362	275
85°	79	140	252	314	330	83
90°	20	110	230	296	317	18
95°	109	146	260	325	338	109
105°	302	314	389	444	455	322
115°	538	558	604	640	649	534
125°	800	827	865	895	902	717
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	

TEST NUMBER: P644273

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1688.3	1688.3	1688.3	1688.3	1688.3
2.5°	1673.1	1697.3	1684.1	1686.5	1688.3
5°	1662.1	1692.4	1676.4	1679.1	1690.7
7.5°	1646.8	1676.3	1662.6	1663.8	1677.4
10°	1633.5	1661.5	1647.3	1650.4	1662.1
12.5°	1616.3	1645.4	1630.5	1635.2	1646.8
15°	1590.6	1617.6	1602.0	1607.5	1619.2
17.5°	1552.4	1579.4	1564.8	1567.0	1578.6
20°	1523.8	1549.0	1540.0	1538.4	1550.0
22.5°	1489.5	1516.5	1509.5	1502.2	1515.7
25°	1435.6	1462.6	1454.6	1447.7	1457.0
27.5°	1382.1	1406.1	1393.5	1384.2	1391.2
30°	1340.2	1364.9	1351.1	1340.3	1347.3
32.5°	1294.4	1320.6	1305.3	1292.6	1295.8
35°	1223.3	1247.5	1236.2	1218.6	1218.6
37.5°	1156.1	1175.6	1162.3	1140.2	1135.1
40°	1106.5	1127.9	1110.8	1084.9	1077.9
42.5°	1055.0	1076.4	1058.9	1029.4	1018.7
45°	980.1	995.0	974.8	944.0	930.0
47.5°	902.8	919.7	892.6	858.1	841.3
50°	851.3	868.5	840.3	800.8	782.2
52.5°	801.7	816.7	787.3	745.2	729.9
55°	722.5	739.3	709.6	668.3	654.7
57.5°	648.6	664.9	632.8	602.5	590.2
60°	600.9	615.3	584.7	558.6	547.8
62.5°	547.5	563.4	536.2	520.4	512.6
65°	476.9	490.4	474.4	465.6	463.2
67.5°	410.6	421.8	416.8	423.1	425.3
70°	364.9	376.0	382.8	397.9	401.5
72.5°	322.9	333.6	355.2	377.6	383.2
75°	257.5	272.4	317.3	352.1	362.2
77.5°	200.3	216.6	288.7	333.5	346.4
80°	162.2	188.1	273.7	324.3	338.6
82.5°	127.8	163.4	262.9	320.0	334.3
85°	78.7	139.5	252.5	313.6	330.3
87.5°	38.4	121.4	241.0	305.0	324.0
90°	20.4	110.1	229.9	295.9	316.8
92.5°	53.8	118.9	238.9	303.3	320.1
95°	109.2	145.7	260.5	324.9	338.3
97.5°	163.2	184.7	290.7	350.3	363.5
100°	201.1	216.3	314.9	372.6	384.6
102.5°	241.7	252.4	343.6	398.3	411.5
105°	302.5	314.5	389.2	444.4	454.7
107.5°	370.2	383.3	446.1	497.7	507.9
110°	415.3	433.3	488.2	534.9	546.5



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	465.3	483.3	532.2	575.1	586.7
115°	538.0	558.3	603.8	640.0	649.3
117.5°	614.0	636.4	677.7	711.1	720.0
120°	669.7	691.0	730.3	762.2	769.7
122.5°	719.8	743.7	783.4	815.3	822.7
125°	800.1	826.9	864.9	894.9	902.4
127.5°	882.5	909.2	944.2	974.6	984.3
130°	941.3	965.3	995.7	1027.7	1038.9
132.5°	995.1	1019.2	1046.9	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)