

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: P644347

Luminaire Tested: CRQ4DIP-SR4F0-50D150U935-FLLFLL-1DUDD-WW

Issue Date: 2/20/2023



Test Information

Test Method: LM-79-2019
Report Number: P644347
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-SR4F0-50D150U935-FLLFLL-1DUDD-WW
Description: NEO-RAY CIRQUE SUSPENDED LED LUMINAIRE
DOWNLIGHT - CURVED FROSTED LENS - 500 LUMENS PER FOOT
UPLIGHT - CURVED FROSTED LENS - 1500 LUMENS PER FOOT
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

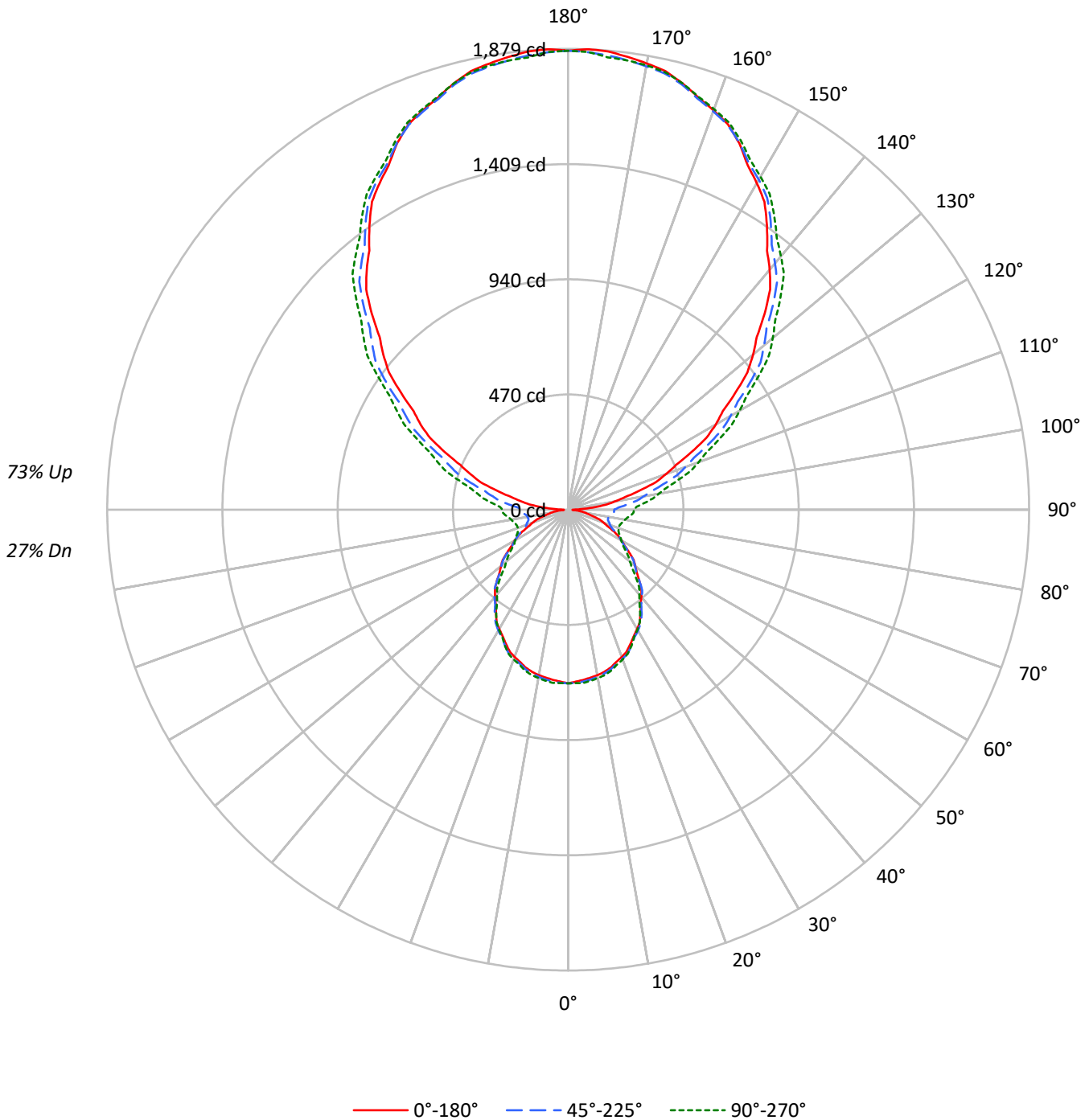
Lumens per Lamp: N/A
Luminaire Lumens: 7352.4 lumens
Efficiency: N/A
Efficacy: 116.9 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.19 / 1.3
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.33')
CIE Type: Semi-Indirect

Input Watts (W): 62.9
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	0
RCR																		
0	102	102	102	102	91	91	91	91	71	71	71	52	52	52	35	35	35	27
1	92	87	83	80	82	78	75	72	61	58	56	45	43	42	30	29	28	21
2	83	76	70	65	74	68	63	58	53	49	46	39	37	34	26	25	23	18
3	76	67	59	54	68	60	54	49	47	42	39	34	31	29	23	21	20	15
4	69	59	51	45	62	53	46	41	41	36	33	31	27	25	21	19	17	13
5	64	52	44	38	57	47	40	35	37	32	28	27	24	21	19	16	15	11
6	59	47	39	33	52	42	35	30	33	28	24	25	21	19	17	15	13	10
7	54	42	34	29	48	38	31	26	30	25	21	22	19	16	15	13	12	9
8	50	38	31	25	45	34	28	23	27	22	19	20	17	15	14	12	10	8
9	46	35	27	22	41	31	25	21	25	20	17	19	15	13	13	11	9	7
10	43	32	25	20	39	29	22	18	23	18	15	17	14	12	12	10	8	6

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11431	11431	11431
5°	11215	10093	9780
10°	11068	9006	8448
15°	10906	8066	7390
20°	10656	7237	6463
25°	10323	6442	5632
30°	9997	5733	4889
35°	9554	5065	4196
40°	9141	4402	3557
45°	8663	3785	2968
50°	8157	3245	2435
55°	7622	2721	2065
60°	7111	2272	1800
65°	6482	1937	1644
70°	5877	1691	1587
75°	5139	1609	1638
80°	4294	1674	1770
85°	3131	1891	2001

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 8663 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	66.9	0.9
10°-20°	189.9	2.6
20°-30°	280.6	3.8
30°-40°	323.4	4.4
40°-50°	314.1	4.3
50°-60°	268.1	3.6
60°-70°	214.8	2.9
70°-80°	178.4	2.4
80°-90°	177.4	2.4
90°-100°	244.9	3.3
100°-110°	415.5	5.7
110°-120°	619.9	8.4
120°-130°	803.9	10.9
130°-140°	910.4	12.4
140°-150°	899.6	12.2
150°-160°	760.9	10.3
160°-170°	506.6	6.9
170°-180°	177.2	2.4
0°-30°	537.4	7.3
0°-40°	860.8	11.7
0°-60°	1443.0	19.6
0°-90°	2013.6	27.4
90°-120°	1280.2	17.4
90°-150°	3894.0	53.0
90°-180°	5339.0	72.6
0°-180°	7352.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	708	708	708	708	708	
5°	697	710	703	704	709	66
15°	667	681	673	674	679	188
25°	602	616	610	607	611	277
35°	513	527	522	511	511	321
45°	411	421	410	396	390	317
55°	303	315	300	284	283	272
65°	200	213	211	223	228	199
75°	108	124	168	209	222	115
85°	33	86	182	240	258	35
90°	17	86	187	247	268	14
95°	99	139	242	298	311	101
105°	302	323	400	452	460	322
115°	553	580	630	668	678	550
125°	832	864	905	938	946	746
135°	1132	1158	1180	1210	1224	872
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°	708.0	708.0	708.0	708.0	708.0
2.5°	701.6	711.8	707.2	707.2	708.0
5°	697.0	709.7	703.0	704.1	709.0
7.5°	690.6	703.9	698.4	697.7	703.4
10°	685.0	696.7	692.0	692.1	697.0
12.5°	677.8	691.9	684.0	685.7	690.6
15°	667.0	680.7	673.0	674.1	679.0
17.5°	651.0	663.5	657.4	657.1	662.0
20°	639.0	650.7	647.0	645.1	650.0
22.5°	624.6	637.1	634.2	629.9	635.6
25°	602.0	615.7	610.0	607.1	611.0
27.5°	579.6	593.8	585.8	580.5	583.4
30°	562.0	574.7	569.0	562.1	565.0
32.5°	542.8	557.0	549.8	542.0	543.4
35°	513.0	526.6	522.0	511.0	511.0
37.5°	484.8	497.7	488.6	478.2	476.0
40°	464.0	477.6	467.0	454.9	452.0
42.5°	442.4	456.0	446.2	431.7	427.2
45°	411.0	420.7	410.0	395.9	390.0
47.5°	378.6	390.1	376.0	359.8	352.8
50°	357.0	367.7	356.0	335.8	328.0
52.5°	336.2	346.9	332.8	313.5	308.0
55°	303.0	314.7	300.0	283.9	282.9
57.5°	272.0	283.5	269.2	263.4	260.9
60°	252.0	262.7	249.9	249.8	248.8
62.5°	229.6	241.9	231.5	238.6	240.7
65°	200.0	212.6	210.9	222.8	227.6
67.5°	172.2	183.9	191.2	213.6	221.7
70°	153.0	164.7	180.8	208.8	218.4
72.5°	135.4	147.8	175.9	207.9	218.4
75°	108.0	123.5	167.6	208.6	222.2
77.5°	84.0	103.4	166.1	213.7	228.7
80°	68.0	95.2	168.4	218.5	235.0
82.5°	53.6	88.6	171.5	227.1	243.6
85°	33.0	86.5	182.1	240.2	257.7
87.5°	17.8	86.8	187.8	247.1	266.7
90°	16.9	86.0	187.0	247.1	267.5
92.5°	47.1	102.2	206.0	264.4	279.4
95°	99.4	139.2	241.5	298.5	311.1
97.5°	153.1	184.7	281.8	335.6	347.6
100°	192.8	219.0	312.0	364.9	374.6
102.5°	236.5	258.0	346.9	396.7	408.8
105°	302.0	323.4	400.4	452.2	460.0
107.5°	374.7	397.0	463.3	513.2	522.3
110°	423.2	449.4	508.6	554.6	565.2



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	475.7	501.9	554.7	599.0	609.7
115°	553.3	580.5	629.8	667.8	677.5
117.5°	634.8	662.4	707.5	744.0	753.4
120°	694.4	719.6	763.9	798.8	806.6
122.5°	746.8	776.0	819.5	854.5	862.2
125°	832.4	863.5	904.9	937.9	945.7
127.5°	920.7	949.8	988.0	1021.4	1031.5
130°	983.4	1008.7	1042.0	1077.1	1088.7
132.5°	1042.2	1067.5	1096.9	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)