

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: P644302

Luminaire Tested: CRQ4DIP-SR4F0-125D50U940-FLLOOB-1DUDD-WW

Issue Date: 2/20/2023



Test Information

Test Method: LM-79-2019
Report Number: P644302
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2203-563-26, G2-2206-689-14)
Test Lab: INNOVATION CENTER
Issue Date: 2/20/2023
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: CRQ4DIP-SR4F0-125D50U940-FLLOOB-1DUDD-WW
Description: NEO-RAY CIRQUE SUSPENDED LED LUMINAIRE
DOWNLIGHT - CURVED FROSTED LENS - 1250 LUMENS PER FOOT
UPLIGHT - BATWING OPTIC - 500 LUMENS PER FOOT
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

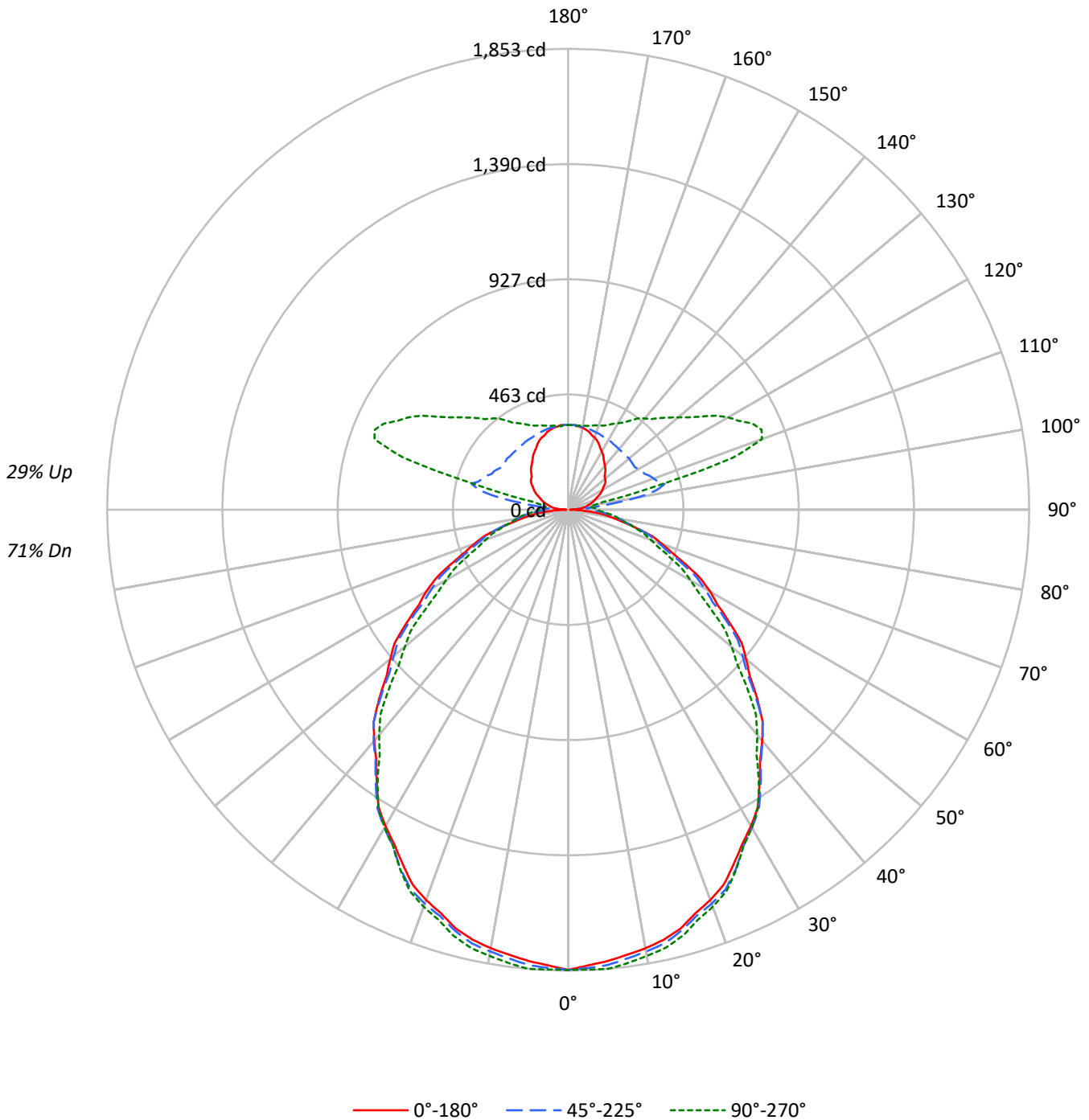
Lumens per Lamp: N/A
Luminaire Lumens: 6604.2 lumens
Efficiency: N/A
Efficacy: 121.0 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.19 / 1.3
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.33')
CIE Type: Semi-Direct

Input Watts (W): 54.6
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	0
RCR																		
0	112	112	112	112	106	106	106	106	95	95	95	85	85	85	75	75	75	71
1	102	98	93	90	97	93	89	86	83	80	78	74	72	70	66	65	63	59
2	93	85	79	74	88	81	75	70	73	68	64	65	62	59	58	56	53	50
3	85	75	68	61	80	71	65	59	64	59	54	58	54	50	52	48	46	42
4	78	67	59	52	74	64	56	50	57	51	47	52	47	43	46	43	39	36
5	72	60	51	45	68	57	49	44	52	45	40	47	41	37	42	38	34	32
6	66	54	45	39	63	51	44	38	47	40	35	42	37	33	38	34	30	28
7	61	49	40	35	58	47	39	34	42	36	31	39	33	29	35	31	27	25
8	57	44	36	31	54	42	35	30	39	33	28	35	30	26	32	28	24	22
9	53	41	33	28	50	39	32	27	36	30	25	33	27	24	30	25	22	20
10	50	37	30	25	47	36	29	24	33	27	23	30	25	22	28	23	20	18

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	29878	29878	29878
5°	29312	26380	25561
10°	28928	23470	22080
15°	28504	21019	19314
20°	27851	18856	16893
25°	26982	16837	14721
30°	26128	14877	12777
35°	24971	13086	10967
40°	23889	11456	9297
45°	22641	9846	7758
50°	21321	8339	6364
55°	19921	7016	5132
60°	18585	5751	4103
65°	16942	4585	3248
70°	15361	3593	2564
75°	13433	2760	2022
80°	11220	2053	1575
85°	8188	1493	1197

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	2.6
10°-20°	495.6	7.5
20°-30°	731.6	11.1
30°-40°	841.2	12.7
40°-50°	816.0	12.4
50°-60°	683.1	10.3
60°-70°	492.2	7.5
70°-80°	300.7	4.6
80°-90°	146.9	2.2
90°-100°	99.8	1.5
100°-110°	319.9	4.8
110°-120°	413.2	6.3
120°-130°	333.3	5.0
130°-140°	266.0	4.0
140°-150°	209.4	3.2
150°-160°	153.1	2.3
160°-170°	95.1	1.4
170°-180°	32.4	0.5
0°-30°	1401.9	21.2
0°-40°	2243.1	34.0
0°-60°	3742.2	56.7
0°-90°	4681.9	70.9
90°-120°	832.8	12.6
90°-150°	1641.6	24.9
90°-180°	1922.0	29.1
0°-180°	6604.2	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	1769	1754	1762	1775	490
25°	1573	1599	1594	1587	1597	725
35°	1341	1361	1349	1336	1336	840
45°	1074	1084	1066	1035	1019	828
55°	792	802	774	726	703	710
65°	523	525	499	462	450	520
75°	282	282	288	280	274	302
85°	86	104	144	154	154	91
90°	8	53	98	116	119	10
95°	43	55	72	93	99	41
105°	93	113	402	520	357	98
115°	136	151	340	701	818	135
125°	180	198	318	552	652	160
135°	210	233	318	454	522	163
145°	249	270	320	396	438	156
155°	292	302	326	359	376	134
165°	324	328	335	344	350	91
175°	341	343	341	339	337	32
180°	341	341	341	341	341	



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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	1844.2	1848.4	1850.5
5°	1821.7	1854.9	1837.4	1840.3	1853.1
7.5°	1805.0	1835.7	1820.2	1823.6	1838.5
10°	1790.4	1821.0	1803.4	1808.9	1821.7
12.5°	1771.5	1800.2	1786.7	1792.2	1805.0
15°	1743.3	1768.9	1753.8	1761.9	1774.7
17.5°	1701.5	1729.1	1713.0	1717.5	1730.2
20°	1670.1	1695.7	1685.8	1686.1	1698.9
22.5°	1632.5	1660.1	1652.4	1646.4	1661.2
25°	1573.4	1599.0	1594.3	1586.7	1597.0
27.5°	1514.9	1533.8	1524.8	1517.1	1524.8
30°	1468.9	1491.9	1476.7	1469.1	1476.7
32.5°	1418.7	1441.7	1426.5	1416.7	1420.3
35°	1340.8	1361.3	1348.7	1335.6	1335.6
37.5°	1267.1	1280.4	1271.8	1249.7	1244.1
40°	1212.7	1228.1	1215.4	1189.0	1181.4
42.5°	1156.3	1171.6	1156.8	1128.3	1116.6
45°	1074.2	1084.4	1066.4	1034.7	1019.3
47.5°	989.5	1000.3	975.4	940.5	922.1
50°	933.1	945.9	914.8	877.7	857.3
52.5°	878.7	887.4	858.3	815.0	796.6
55°	791.9	802.2	773.6	726.1	703.1
57.5°	710.9	720.6	686.9	641.5	623.6
60°	658.6	666.3	632.5	585.1	567.2
62.5°	600.1	607.8	576.1	534.9	517.0
65°	522.7	525.3	499.2	462.3	449.6
67.5°	450.1	450.1	428.1	400.7	390.5
70°	399.9	399.9	384.2	363.1	352.8
72.5°	353.9	351.8	342.4	327.6	319.4
75°	282.3	282.3	287.5	279.5	274.4
77.5°	219.5	215.5	237.8	236.7	234.2
80°	177.7	177.7	206.5	211.6	209.1
82.5°	140.1	144.2	181.4	188.6	186.1
85°	86.3	104.1	143.8	154.2	154.2
87.5°	39.2	70.8	113.8	127.8	128.3
90°	7.8	53.4	98.4	116.3	118.8
92.5°	21.4	46.5	86.8	106.5	112.8
95°	43.3	55.4	72.1	92.6	99.4
97.5°	61.8	76.6	165.9	92.2	90.2
100°	72.1	89.9	284.6	119.1	99.0
102.5°	80.3	99.8	365.5	232.8	146.9
105°	92.7	113.0	401.5	519.8	357.1
107.5°	105.0	117.0	378.1	736.8	693.6
110°	113.2	125.6	365.7	769.3	828.5



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	123.5	135.9	355.4	743.7	841.5
115°	136.3	151.3	340.0	701.0	818.5
117.5°	149.1	166.7	335.6	652.9	773.8
120°	159.0	177.0	326.6	616.6	742.5
122.5°	167.6	185.2	318.1	587.2	703.0
125°	180.0	198.0	318.1	551.6	652.4
127.5°	189.3	210.7	318.5	510.4	609.9
130°	194.1	219.2	320.2	482.8	577.2
132.5°	198.5	223.6	318.1	470.4	548.1
135°	210.3	233.4	317.6	454.3	521.5
137.5°	221.0	245.8	317.6	436.5	494.0
140°	229.6	252.7	317.6	426.1	478.5
142.5°	238.2	259.6	319.3	414.0	463.1
145°	248.9	269.9	319.7	395.8	437.8
147.5°	261.8	280.3	322.3	382.7	415.0
150°	270.4	287.2	324.0	374.0	401.3
152.5°	279.0	294.1	324.0	367.0	389.3
155°	291.8	302.3	326.2	358.7	375.5
157.5°	302.1	312.2	328.8	353.5	365.7
160°	309.0	317.4	330.5	350.0	360.5
162.5°	314.2	322.6	332.2	348.2	355.4
165°	324.0	328.2	334.8	343.5	349.8
167.5°	329.6	333.4	336.9	341.3	345.1
170°	334.8	336.9	336.9	341.2	343.3
172.5°	336.5	340.3	338.6	339.5	341.6
175°	341.2	343.3	341.2	339.0	336.9
177.5°	341.2	342.9	341.2	341.2	339.5
180°	341.2	341.2	341.2	341.2	341.2

(END OF REPORT)