

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: P644262

Luminaire Tested: CRQ4DIP-SR4F0-125D125U930-FLLOOB-1DUDD-WW

Issue Date: 2/20/2023



Test Information

Test Method: LM-79-2019
Report Number: P644262
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-SR4F0-125D125U930-FLLOOB-1DUDD-WW
Description: NEO-RAY CIRQUE SUSPENDED LED LUMINAIRE
DOWNLIGHT - CURVED FROSTED LENS - 1250 LUMENS PER FOOT
UPLIGHT - BATWING OPTIC - 1250 LUMENS PER FOOT
Light Source: 3000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

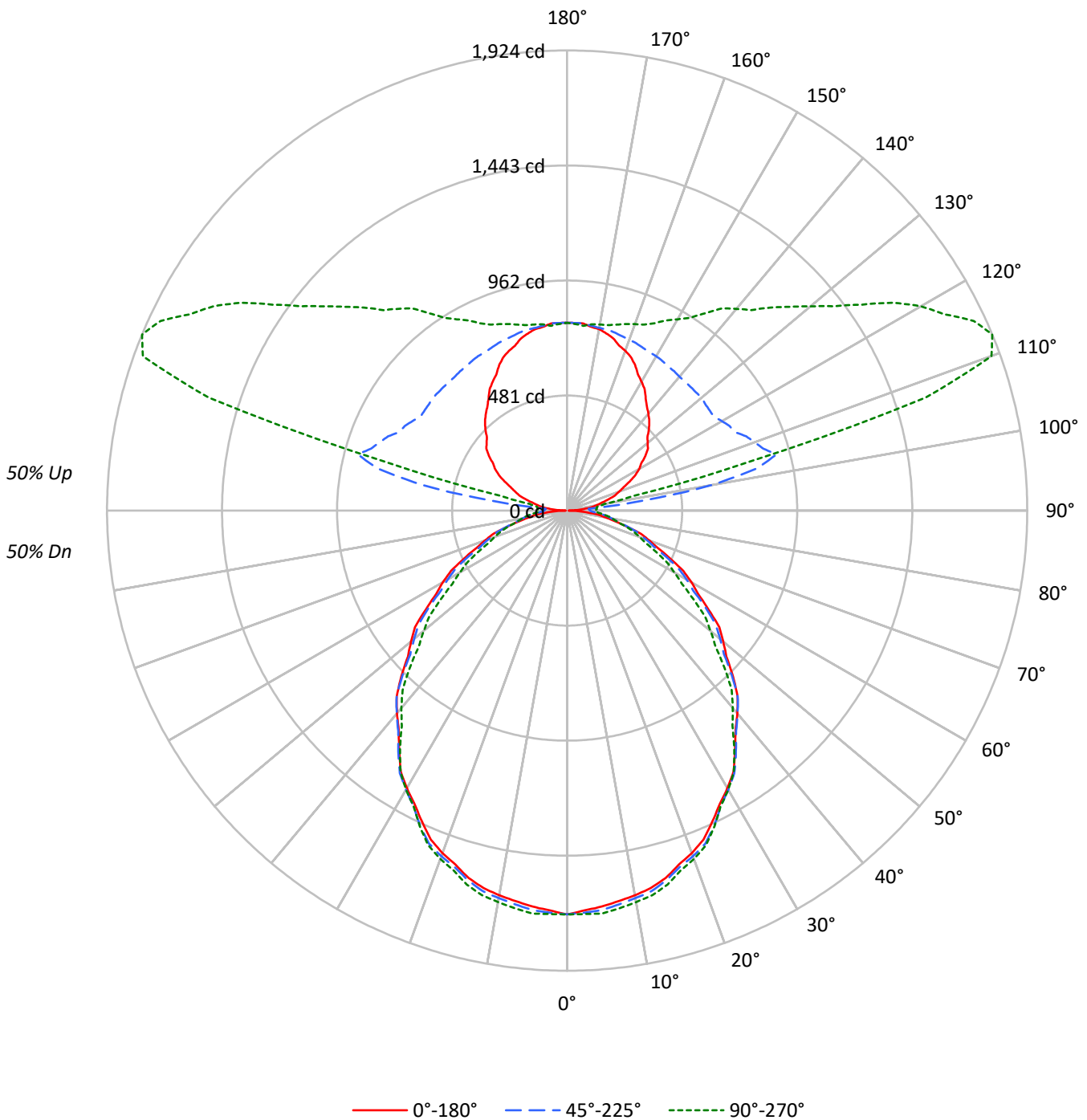
Lumens per Lamp: N/A
Luminaire Lumens: 8571.5 lumens
Efficiency: N/A
Efficacy: 109.6 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.19 / 1.3
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.33')
CIE Type: General Diffuse

Input Watts (W): 78.2
Input Voltage (V): 120
Input Current (A_{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	107	107	107	107	99	99	99	99	83	83	83	69	69	69	56	56	56	50				
1	98	93	89	86	90	86	83	80	73	70	68	60	59	57	49	48	47	42				
2	89	81	75	70	82	75	70	65	64	60	56	53	50	48	43	41	40	35				
3	81	72	64	58	75	66	60	55	56	51	47	47	44	41	39	36	34	30				
4	74	63	56	50	68	59	52	46	50	45	41	42	38	35	34	32	29	26				
5	68	57	48	42	63	53	45	40	45	39	35	38	34	30	31	28	26	22				
6	63	51	43	37	58	47	40	35	40	35	31	34	30	27	28	25	23	20				
7	58	46	38	32	54	43	36	31	37	31	27	31	27	24	26	23	20	17				
8	54	42	34	29	50	39	32	27	34	28	24	29	24	21	24	20	18	16				
9	50	38	31	26	46	36	29	24	31	25	22	26	22	19	22	19	16	14				
10	47	35	28	23	43	33	26	22	28	23	19	24	20	17	20	17	15	13				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	27259	27259	27259
5°	26744	24068	23321
10°	26393	21414	20146
15°	26007	19177	17622
20°	25411	17204	15413
25°	24619	15361	13431
30°	23839	13574	11658
35°	22782	11939	10006
40°	21797	10452	8483
45°	20658	8982	7078
50°	19452	7608	5807
55°	18175	6402	4683
60°	16957	5247	3743
65°	15457	4184	2963
70°	14017	3278	2340
75°	12253	2518	1846
80°	10241	1873	1437
85°	7467	1363	1092

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	1.9
10°-20°	452.2	5.3
20°-30°	667.5	7.8
30°-40°	767.5	9.0
40°-50°	744.5	8.7
50°-60°	623.2	7.3
60°-70°	449.0	5.2
70°-80°	274.4	3.2
80°-90°	135.1	1.6
90°-100°	149.3	1.7
100°-110°	706.9	8.2
110°-120°	940.4	11.0
120°-130°	762.8	8.9
130°-140°	611.6	7.1
140°-150°	481.9	5.6
150°-160°	352.4	4.1
160°-170°	218.9	2.6
170°-180°	74.6	0.9
0°-30°	1279.1	14.9
0°-40°	2046.6	23.9
0°-60°	3414.3	39.8
0°-90°	4272.8	49.8
90°-120°	1796.6	21.0
90°-150°	3652.9	42.6
90°-180°	4299.0	50.2
0°-180°	8571.5	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	1614	1600	1608	1619	447
25°	1436	1459	1455	1448	1457	661
35°	1223	1242	1230	1219	1219	766
45°	980	989	973	944	930	755
55°	722	732	706	662	642	648
65°	477	479	456	422	410	474
75°	258	258	262	255	250	275
85°	79	95	131	141	141	83
90°	7	52	96	115	117	11
95°	63	95	90	112	124	64
105°	177	245	906	1163	782	187
115°	288	337	775	1606	1876	286
125°	400	448	728	1269	1501	355
135°	484	537	731	1045	1200	373
145°	573	621	736	911	1007	360
155°	672	696	750	825	864	308
165°	746	755	770	790	805	209
175°	785	790	785	780	775	74
180°	785	785	785	785	785	

TEST NUMBER: P644262

CATALOG NUMBER: CRQ4DIP-SR4F0-125D125U930-FLLOOB-1DUDD-WW

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	1682.6	1686.5	1688.3
5°	1662.1	1692.4	1676.4	1679.1	1690.7
7.5°	1646.8	1674.8	1660.7	1663.8	1677.4
10°	1633.5	1661.5	1645.4	1650.4	1662.1
12.5°	1616.3	1642.4	1630.1	1635.2	1646.8
15°	1590.6	1613.9	1600.1	1607.5	1619.2
17.5°	1552.4	1577.6	1562.9	1567.0	1578.6
20°	1523.8	1547.1	1538.1	1538.4	1550.0
22.5°	1489.5	1514.6	1507.6	1502.2	1515.7
25°	1435.6	1458.9	1454.6	1447.7	1457.0
27.5°	1382.1	1399.4	1391.2	1384.2	1391.2
30°	1340.2	1361.2	1347.3	1340.3	1347.3
32.5°	1294.4	1315.4	1301.5	1292.6	1295.8
35°	1223.3	1242.0	1230.5	1218.6	1218.6
37.5°	1156.1	1168.2	1160.4	1140.2	1135.1
40°	1106.5	1120.5	1108.9	1084.9	1077.9
42.5°	1055.0	1069.0	1055.4	1029.4	1018.7
45°	980.1	989.4	972.9	944.0	930.0
47.5°	902.8	912.6	890.0	858.1	841.3
50°	851.3	863.0	834.6	800.8	782.2
52.5°	801.7	809.6	783.1	743.6	726.8
55°	722.5	731.9	705.9	662.5	641.5
57.5°	648.6	657.5	626.7	585.3	569.0
60°	600.9	607.9	577.1	533.8	517.5
62.5°	547.5	554.5	525.6	488.0	471.7
65°	476.9	479.3	455.5	421.8	410.2
67.5°	410.6	410.6	390.6	365.6	356.3
70°	364.9	364.9	350.5	331.3	321.9
72.5°	322.9	321.0	312.4	298.9	291.4
75°	257.5	257.5	262.3	255.1	250.4
77.5°	200.3	196.6	217.0	216.0	213.7
80°	162.2	162.2	188.4	193.1	190.8
82.5°	127.8	131.5	165.5	172.1	169.8
85°	78.7	95.0	131.2	140.7	140.7
87.5°	35.8	65.2	105.0	118.4	118.9
90°	7.2	51.6	95.7	115.0	117.4
92.5°	26.6	52.4	92.3	115.7	123.7
95°	63.3	94.8	89.6	111.5	123.5
97.5°	98.7	154.8	326.6	135.8	127.0
100°	122.4	188.2	611.2	212.1	158.9
102.5°	144.2	213.8	809.0	485.5	283.6
105°	176.9	245.0	905.6	1163.2	781.7
107.5°	209.6	257.9	859.9	1674.9	1572.0
110°	231.4	277.7	834.3	1755.5	1888.2



TEST NUMBER: P644262

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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	255.1	301.4	810.6	1702.3	1923.8
115°	288.3	336.9	775.0	1605.7	1876.1
117.5°	321.9	372.4	765.6	1499.3	1777.4
120°	347.7	396.1	747.9	1418.7	1708.4
122.5°	367.4	417.9	728.2	1351.0	1617.5
125°	399.6	448.0	728.2	1269.3	1501.0
127.5°	425.4	477.6	729.2	1174.4	1403.2
130°	439.3	497.2	733.1	1110.9	1328.2
132.5°	455.2	513.1	731.2	1082.4	1261.0
135°	483.9	537.0	730.7	1045.3	1199.8
137.5°	508.6	565.5	730.7	1004.3	1136.6
140°	528.3	581.4	730.7	980.4	1101.1
142.5°	548.1	597.3	734.7	952.5	1065.5
145°	572.7	621.0	735.7	910.7	1007.2
147.5°	602.4	644.9	741.6	880.6	954.9
150°	622.1	660.7	745.6	860.5	923.3
152.5°	641.9	676.6	745.6	844.5	895.7
155°	671.5	695.6	750.5	825.4	864.1
157.5°	695.2	718.4	756.4	813.3	841.3
160°	711.0	730.3	760.4	805.4	829.5
162.5°	722.8	742.2	764.3	801.2	817.6
165°	745.6	755.2	770.2	790.3	804.8
167.5°	758.4	767.1	775.2	785.3	793.9
170°	770.2	775.1	775.2	785.2	790.0
172.5°	774.2	782.9	779.1	781.2	786.0
175°	785.1	789.9	785.1	780.0	775.2
177.5°	785.1	788.9	785.1	785.0	781.1
180°	785.1	785.1	785.1	785.1	785.1

(END OF REPORT)