

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: P644310

Luminaire Tested: CRQ4DIP-SR4F0-125D75U930-FLLOOB-1DUDD-WW

Issue Date: 2/20/2023



Test Information

Test Method: LM-79-2019
Report Number: P644310
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-SR4F0-125D75U930-FLLOOB-1DUDD-WW
Description: NEO-RAY CIRQUE SUSPENDED LED LUMINAIRE
DOWNLIGHT - CURVED FROSTED LENS - 1250 LUMENS PER FOOT
UPLIGHT - BATWING OPTIC - 750 LUMENS PER FOOT
Light Source: 3000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

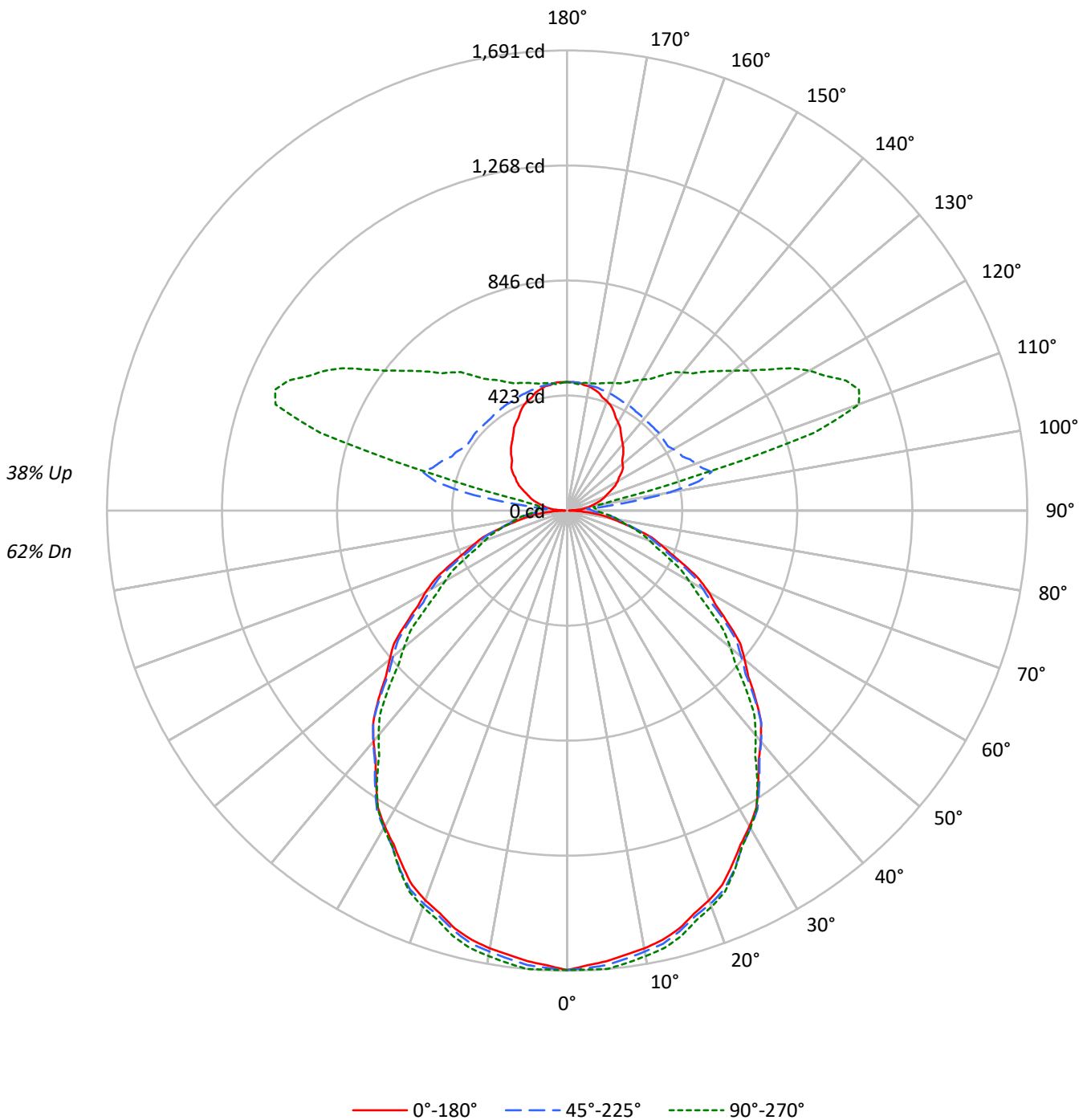
Lumens per Lamp: N/A
Luminaire Lumens: 6891.4 lumens
Efficiency: N/A
Efficacy: 113.3 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.19 / 1.3
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.33')
CIE Type: Semi-Direct

Input Watts (W): 60.8
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										
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	50	30	10	0														
RCR																																						
0	110	110	110	110	103	103	103	103	90	90	90	78	78	78	67	67	67	62																				
1	100	96	92	88	94	90	86	83	79	76	74	68	66	65	59	58	56	52																				
2	91	84	77	72	85	79	73	68	69	65	61	60	57	54	52	50	47	43																				
3	83	74	66	60	78	69	63	57	61	56	51	53	49	46	46	43	41	37																				
4	76	65	57	51	71	62	54	49	54	49	44	48	43	39	41	38	35	32																				
5	70	58	50	44	66	55	48	42	49	43	38	43	38	34	37	34	31	28																				
6	65	53	44	38	61	50	42	37	44	38	33	39	34	30	34	30	27	24																				
7	60	48	39	34	56	45	38	32	40	34	30	35	31	27	31	27	24	22																				
8	56	43	35	30	52	41	34	29	37	31	26	32	28	24	29	25	22	19																				
9	52	40	32	27	49	38	31	26	34	28	24	30	25	22	26	23	20	18																				
10	49	36	29	24	46	35	28	23	31	25	21	28	23	20	25	21	18	16																				

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	2.3
10°-20°	452.2	6.6
20°-30°	667.5	9.7
30°-40°	767.5	11.1
40°-50°	744.5	10.8
50°-60°	623.2	9.0
60°-70°	449.0	6.5
70°-80°	274.4	4.0
80°-90°	134.4	1.9
90°-100°	110.8	1.6
100°-110°	433.0	6.3
110°-120°	568.6	8.3
120°-130°	460.1	6.7
130°-140°	368.2	5.3
140°-150°	290.0	4.2
150°-160°	212.0	3.1
160°-170°	131.7	1.9
170°-180°	44.9	0.7
0°-30°	1279.1	18.6
0°-40°	2046.6	29.7
0°-60°	3414.3	49.5
0°-90°	4272.1	62.0
90°-120°	1112.4	16.1
90°-150°	2230.7	32.4
90°-180°	2619.0	38.0
0°-180°	6891.4	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	50	92	109	112	10
95°	48	66	74	94	102	47
105°	116	151	550	709	481	122
115°	180	206	468	968	1131	178
125°	244	272	439	764	903	217
135°	291	323	440	629	722	225
145°	345	374	443	548	606	216
155°	404	419	452	497	520	186
165°	449	454	464	476	484	126
175°	472	475	472	469	466	45
180°	472	472	472	472	472	



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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	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	64.8	104.2	117.2	117.7
90°	7.2	49.7	91.8	109.1	111.5
92.5°	21.9	45.8	83.7	103.5	110.0
95°	47.6	65.6	73.8	93.7	101.8
97.5°	70.8	98.8	211.0	101.7	97.5
100°	85.1	118.1	379.2	143.8	113.6
102.5°	97.4	132.8	495.2	305.3	184.9
105°	116.0	151.4	549.7	708.6	480.8
107.5°	134.5	158.1	520.1	1013.3	952.3
110°	146.8	170.0	503.9	1060.2	1141.0



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	161.1	184.3	489.7	1026.7	1160.9
115°	180.1	205.6	468.3	968.2	1130.9
117.5°	199.2	227.0	462.5	903.0	1070.4
120°	214.0	241.3	451.0	853.7	1028.0
122.5°	225.8	253.6	439.2	813.0	973.4
125°	244.3	271.6	439.2	763.8	903.2
127.5°	258.6	289.3	439.7	706.7	844.4
130°	266.2	301.1	442.1	668.5	799.3
132.5°	274.3	309.2	440.2	651.4	758.8
135°	291.2	323.1	439.7	629.0	722.0
137.5°	306.0	340.3	439.7	604.4	684.0
140°	317.9	349.9	439.7	589.9	662.6
142.5°	329.8	359.4	442.1	573.2	641.2
145°	344.7	373.7	442.7	548.0	606.1
147.5°	362.5	388.1	446.3	529.9	574.6
150°	374.4	397.6	448.7	517.8	555.6
152.5°	386.3	407.2	448.7	508.2	539.0
155°	404.1	418.6	451.6	496.7	520.0
157.5°	418.3	432.3	455.2	489.4	506.3
160°	427.9	439.5	457.6	484.6	499.2
162.5°	435.0	446.6	459.9	482.2	492.0
165°	448.7	454.5	463.5	475.6	484.3
167.5°	456.4	461.6	466.5	472.5	477.8
170°	463.5	466.4	466.5	472.5	475.4
172.5°	465.9	471.1	468.9	470.1	473.0
175°	472.4	475.3	472.4	469.4	466.5
177.5°	472.4	474.7	472.4	472.4	470.0
180°	472.4	472.4	472.4	472.4	472.4

(END OF REPORT)