

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: P644210

Luminaire Tested: CRQ4DIP-SR4F0-100D25U835-FLLOOB-1DUDD-WW

Issue Date: 2/20/2023



Test Information

Test Method: LM-79-2019
Report Number: P644210
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-SR4F0-100D25U835-FLLOOB-1DUDD-WW
Description: NEO-RAY CIRQUE SUSPENDED LED LUMINAIRE
DOWNLIGHT - CURVED FROSTED LENS - 1000 LUMENS PER FOOT
UPLIGHT - BATWING OPTIC - 250 LUMENS PER FOOT
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

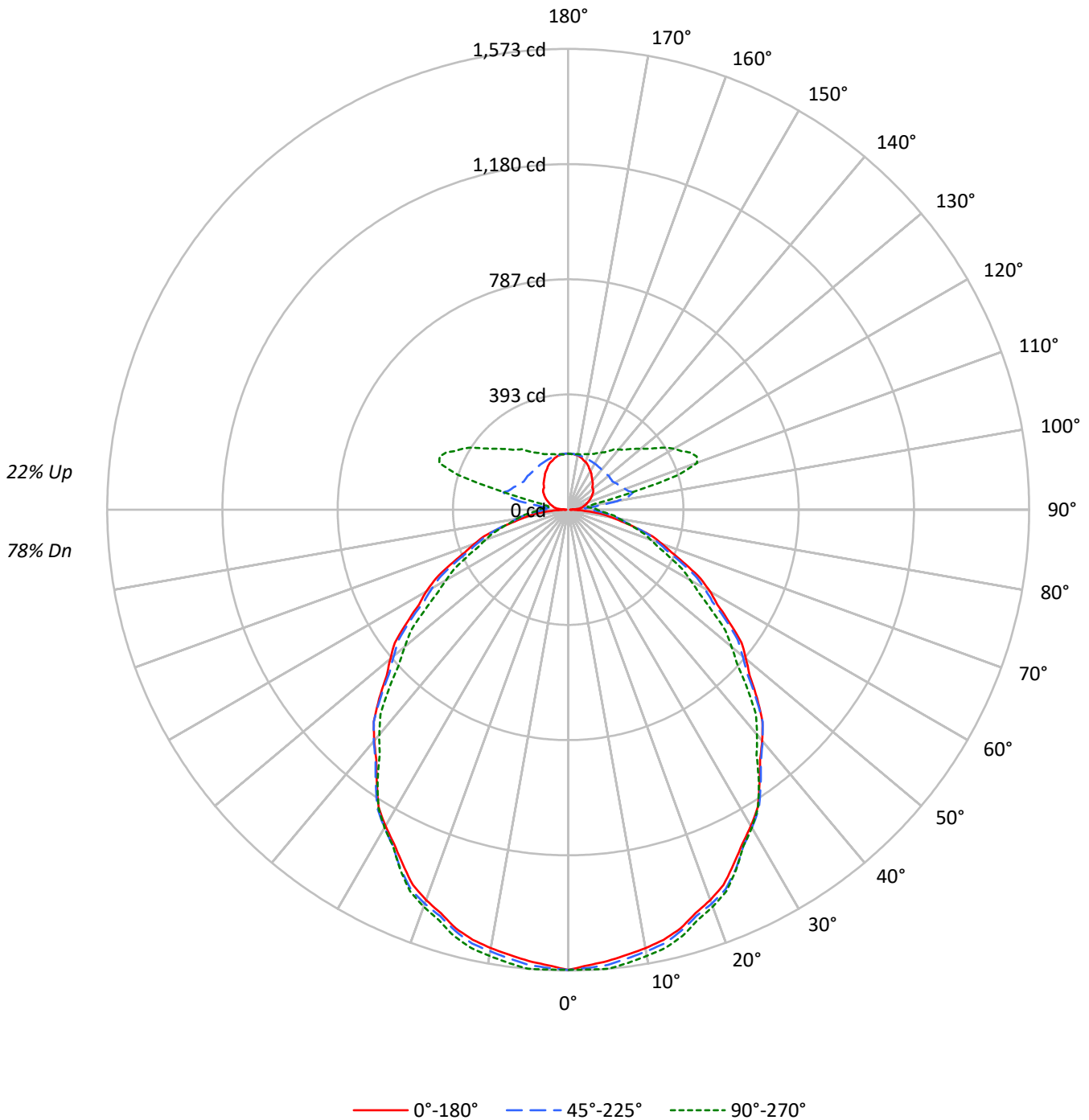
Lumens per Lamp: N/A
Luminaire Lumens: 5077.6 lumens
Efficiency: N/A
Efficacy: 132.9 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.19 / 1.3
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.33')
CIE Type: Semi-Direct

Input Watts (W): 38.2
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										
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	114	114	114	114	109	109	109	109	99	99	99	90	90	90	82	82	82	82	82	82	82	82	82	78														
1	104	99	95	91	99	95	91	88	87	84	81	79	77	75	72	70	69	69	69	69	69	69	69	65														
2	95	87	80	75	90	83	77	72	76	71	67	70	66	63	64	61	58	58	58	58	58	58	58	55														
3	86	76	69	63	82	73	66	61	67	62	57	62	57	53	57	53	50	50	50	50	50	50	50	47														
4	79	68	60	53	75	65	58	52	60	54	49	55	50	46	51	46	43	43	43	43	43	43	43	40														
5	73	61	52	46	69	58	51	45	54	47	42	50	44	40	46	41	38	38	38	38	38	38	38	35														
6	67	55	46	40	64	53	45	39	49	42	37	45	39	35	42	37	33	33	33	33	33	33	33	31														
7	63	50	41	36	60	48	40	35	44	38	33	41	36	31	38	33	30	30	30	30	30	30	30	27														
8	58	45	37	32	56	44	36	31	41	34	30	38	32	28	35	30	27	27	27	27	27	27	27	25														
9	54	42	34	28	52	40	33	28	37	31	27	35	29	25	32	28	24	24	24	24	24	24	24	22														
10	51	38	31	26	49	37	30	25	35	28	24	32	27	23	30	25	22	22	22	22	22	22	22	20														

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	25362	25362	25362
5°	24882	22393	21698
10°	24555	19922	18743
15°	24195	17842	16394
20°	23642	16006	14340
25°	22904	14292	12496
30°	22180	12629	10846
35°	21196	11107	9309
40°	20279	9724	7892
45°	19218	8357	6586
50°	18097	7078	5402
55°	16910	5956	4356
60°	15777	4882	3482
65°	14381	3893	2756
70°	13037	3050	2177
75°	11401	2343	1717
80°	9528	1742	1337
85°	6945	1267	1016

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 19218 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	148.3	2.9
10°-20°	420.7	8.3
20°-30°	621.1	12.2
30°-40°	714.0	14.1
40°-50°	692.7	13.6
50°-60°	579.8	11.4
60°-70°	417.7	8.2
70°-80°	255.3	5.0
80°-90°	124.4	2.5
90°-100°	72.6	1.4
100°-110°	185.4	3.7
110°-120°	233.8	4.6
120°-130°	187.8	3.7
130°-140°	149.3	2.9
140°-150°	117.4	2.3
150°-160°	85.9	1.7
160°-170°	53.3	1.1
170°-180°	18.2	0.4
0°-30°	1190.0	23.4
0°-40°	1904.1	37.5
0°-60°	3176.6	62.6
0°-90°	3974.0	78.3
90°-120°	491.8	9.7
90°-150°	946.2	18.6
90°-180°	1104.0	21.7
0°-180°	5077.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1571	1571	1571	1571	1571	
5°	1546	1575	1560	1562	1573	147
15°	1480	1502	1489	1496	1506	416
25°	1336	1357	1353	1347	1356	615
35°	1138	1156	1145	1134	1134	713
45°	912	920	905	878	865	703
55°	672	681	657	616	597	603
65°	444	446	424	392	382	441
75°	240	240	244	237	233	256
85°	73	88	122	131	131	77
90°	7	45	82	97	99	9
95°	32	38	56	73	78	30
105°	60	66	229	298	208	63
115°	82	87	192	395	460	81
125°	104	112	179	309	366	92
135°	118	131	178	255	292	91
145°	140	151	179	222	245	88
155°	164	170	183	201	211	75
165°	182	184	188	193	196	51
175°	191	192	191	190	189	18
180°	191	191	191	191	191	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1570.8	1570.8	1570.8	1570.8	1570.8
2.5°	1556.6	1579.1	1565.4	1569.0	1570.8
5°	1546.4	1574.6	1559.7	1562.1	1573.0
7.5°	1532.2	1558.2	1545.0	1548.0	1560.6
10°	1519.7	1545.8	1530.8	1535.5	1546.4
12.5°	1503.8	1528.1	1516.6	1521.3	1532.2
15°	1479.8	1501.5	1488.7	1495.6	1506.4
17.5°	1444.3	1467.7	1454.1	1457.9	1468.7
20°	1417.7	1439.4	1431.0	1431.2	1442.1
22.5°	1385.7	1409.2	1402.6	1397.6	1410.1
25°	1335.6	1357.3	1353.3	1346.9	1355.6
27.5°	1285.9	1302.0	1294.3	1287.8	1294.3
30°	1246.9	1266.4	1253.5	1247.0	1253.5
32.5°	1204.3	1223.8	1210.9	1202.5	1205.6
35°	1138.1	1155.5	1144.8	1133.7	1133.7
37.5°	1075.6	1086.9	1079.6	1060.8	1056.1
40°	1029.4	1042.4	1031.6	1009.3	1002.8
42.5°	981.5	994.5	982.0	957.8	947.8
45°	911.8	920.5	905.2	878.3	865.3
47.5°	840.0	849.1	828.0	798.3	782.7
50°	792.0	802.9	776.5	745.1	727.7
52.5°	745.9	753.3	728.6	691.8	676.2
55°	672.2	680.9	656.7	616.3	596.8
57.5°	603.5	611.7	583.0	544.5	529.4
60°	559.1	565.6	536.9	496.6	481.4
62.5°	509.4	515.9	489.0	454.0	438.8
65°	443.7	445.9	423.8	392.4	381.6
67.5°	382.0	382.0	363.4	340.1	331.5
70°	339.4	339.4	326.1	308.2	299.5
72.5°	300.4	298.7	290.6	278.1	271.1
75°	239.6	239.6	244.0	237.3	233.0
77.5°	186.4	182.9	201.9	201.0	198.8
80°	150.9	150.9	175.3	179.7	177.5
82.5°	118.9	122.4	154.0	160.1	158.0
85°	73.2	88.4	122.0	130.9	130.9
87.5°	33.3	60.0	96.3	108.1	108.5
90°	6.7	44.7	82.3	96.8	99.0
92.5°	16.6	37.3	71.0	86.6	91.4
95°	31.8	37.9	56.2	73.1	77.6
97.5°	43.7	47.4	104.5	67.5	67.3
100°	49.5	54.3	168.6	79.6	69.8
102.5°	53.5	59.2	211.5	141.0	93.7
105°	59.5	66.5	228.9	298.3	208.5
107.5°	65.5	68.0	214.1	417.4	393.9
110°	69.5	72.8	206.6	434.4	468.3

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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	75.3	78.5	200.8	418.8	474.4
115°	81.7	87.1	192.1	394.6	460.4
117.5°	87.9	95.8	189.5	366.7	434.4
120°	92.9	101.5	183.9	345.7	416.3
122.5°	97.7	105.5	179.1	329.2	394.2
125°	103.9	112.5	179.1	309.3	365.8
127.5°	108.2	119.7	179.3	286.2	341.9
130°	110.3	124.4	180.3	270.7	323.7
132.5°	111.6	125.7	178.5	263.8	307.3
135°	117.9	130.9	178.1	254.7	292.4
137.5°	123.9	137.8	178.1	244.7	277.0
140°	128.7	141.7	178.1	238.9	268.3
142.5°	133.6	145.6	179.0	232.1	259.6
145°	139.6	151.3	179.3	221.9	245.4
147.5°	146.8	157.1	180.7	214.6	232.7
150°	151.6	161.0	181.7	209.7	225.0
152.5°	156.4	164.9	181.7	205.8	218.3
155°	163.6	169.5	182.9	201.1	210.6
157.5°	169.4	175.1	184.3	198.2	205.0
160°	173.3	178.0	185.3	196.2	202.1
162.5°	176.1	180.8	186.3	195.2	199.2
165°	181.7	184.0	187.7	192.6	196.1
167.5°	184.8	186.9	188.9	191.4	193.5
170°	187.7	188.9	188.9	191.3	192.5
172.5°	188.7	190.8	189.9	190.4	191.5
175°	191.3	192.5	191.3	190.1	188.9
177.5°	191.3	192.2	191.3	191.3	190.3
180°	191.3	191.3	191.3	191.3	191.3

(END OF REPORT)