

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: P644184

Luminaire Tested: CRQ4DIP-SR4F0-100D125U830-FLLOOB-1DUDD-WW

Issue Date: 2/20/2023



Test Information

Test Method: LM-79-2019
Report Number: P644184
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-SR4F0-100D125U830-FLLOOB-1DUDD-WW
Description: NEO-RAY CIRQUE SUSPENDED LED LUMINAIRE
DOWNLIGHT - CURVED FROSTED LENS - 1000 LUMENS PER FOOT
UPLIGHT - BATWING OPTIC - 1250 LUMENS PER FOOT
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

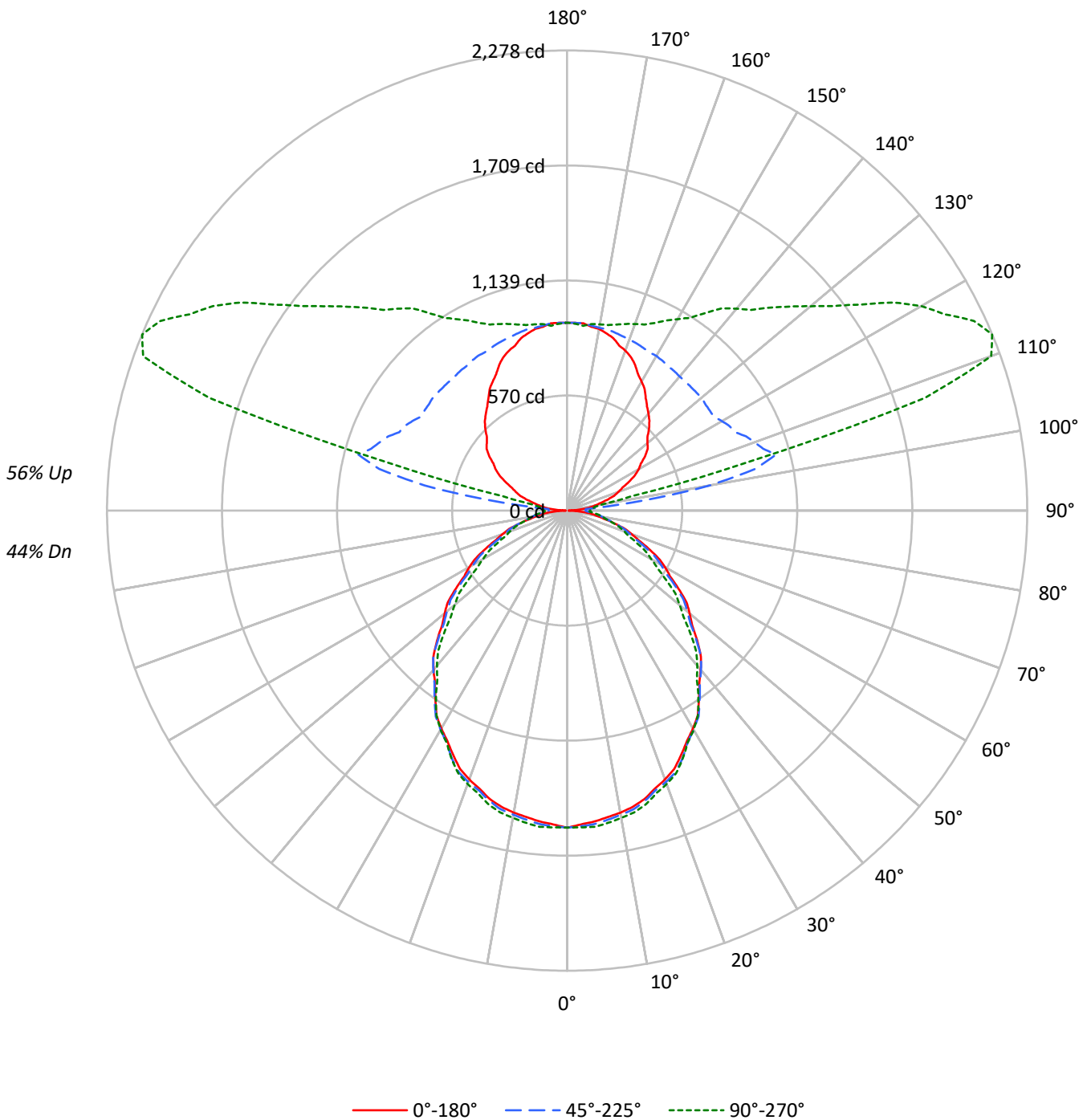
Lumens per Lamp: N/A
Luminaire Lumens: 9044.8 lumens
Efficiency: N/A
Efficacy: 132.8 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.19 / 1.3
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.33')
CIE Type: General Diffuse

Input Watts (W): 68.1
Input Voltage (V): 120
Input Current (Ain): 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	106	106	106	106	97	97	97	97	80	80	80	65	65	65	51	51	51	44				44
1	96	92	88	84	88	84	81	78	70	67	65	57	55	53	44	43	42	37				37
2	88	80	74	69	80	74	68	64	61	57	54	50	47	45	39	37	36	31				31
3	80	71	63	58	73	65	59	53	54	49	46	44	41	38	35	32	30	26				26
4	73	63	55	49	67	58	51	45	48	43	39	39	36	33	31	28	26	23				23
5	67	56	48	42	61	51	44	39	43	38	34	35	31	28	28	25	23	20				20
6	62	50	42	36	56	46	39	34	39	33	29	32	28	25	26	23	20	17				17
7	57	45	37	32	52	42	35	30	35	30	26	29	25	22	23	20	18	15				15
8	53	41	33	28	49	38	31	26	32	27	23	27	23	20	21	18	16	14				14
9	49	37	30	25	45	35	28	23	29	24	20	24	20	18	20	17	15	12				12
10	46	34	27	22	42	32	25	21	27	22	18	23	19	16	18	15	13	11				11

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	25339	25339	25339
5°	24859	22373	21678
10°	24534	19906	18726
15°	24174	17825	16380
20°	23620	15991	14327
25°	22883	14279	12484
30°	22158	12618	10836
35°	21177	11098	9301
40°	20261	9715	7885
45°	19201	8350	6580
50°	18081	7072	5397
55°	16894	5950	4353
60°	15763	4877	3479
65°	14368	3889	2754
70°	13026	3047	2175
75°	11392	2341	1715
80°	9515	1740	1336
85°	6936	1266	1016

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 19201 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	148.1	1.6
10°-20°	420.3	4.6
20°-30°	620.5	6.9
30°-40°	713.4	7.9
40°-50°	692.0	7.7
50°-60°	579.3	6.4
60°-70°	417.4	4.6
70°-80°	255.0	2.8
80°-90°	126.0	1.4
90°-100°	163.4	1.8
100°-110°	832.7	9.2
110°-120°	1112.6	12.3
120°-130°	903.1	10.0
130°-140°	724.6	8.0
140°-150°	571.0	6.3
150°-160°	417.5	4.6
160°-170°	259.3	2.9
170°-180°	88.4	1.0
0°-30°	1189.0	13.1
0°-40°	1902.4	21.0
0°-60°	3173.7	35.1
0°-90°	3972.1	43.9
90°-120°	2108.8	23.3
90°-150°	4307.5	47.6
90°-180°	5073.0	56.1
0°-180°	9044.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1569	1569	1569	1569	1569	
5°	1545	1573	1558	1561	1572	147
15°	1478	1500	1487	1494	1505	416
25°	1334	1356	1352	1346	1354	615
35°	1137	1154	1144	1133	1133	712
45°	911	920	904	878	864	702
55°	672	680	656	616	596	602
65°	443	446	423	392	381	441
75°	239	239	244	237	233	256
85°	73	88	122	131	131	77
90°	7	49	92	111	113	10
95°	69	107	93	115	129	71
105°	204	288	1070	1373	920	215
115°	337	397	917	1901	2222	334
125°	471	530	862	1504	1778	418
135°	573	636	866	1239	1422	442
145°	679	736	872	1079	1194	426
155°	796	824	889	978	1024	365
165°	883	895	913	936	954	248
175°	930	936	930	924	918	88
180°	930	930	930	930	930	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1569.4	1569.4	1569.4	1569.4	1569.4
2.5°	1555.2	1577.7	1564.0	1567.6	1569.4
5°	1545.0	1573.1	1558.3	1560.7	1571.6
7.5°	1530.8	1556.8	1543.6	1546.6	1559.2
10°	1518.4	1544.4	1529.5	1534.1	1545.0
12.5°	1502.4	1526.7	1515.3	1519.9	1530.8
15°	1478.5	1500.1	1487.3	1494.2	1505.1
17.5°	1443.0	1466.4	1452.8	1456.6	1467.4
20°	1416.4	1438.1	1429.7	1430.0	1440.8
22.5°	1384.5	1407.9	1401.3	1396.3	1408.9
25°	1334.4	1356.1	1352.1	1345.7	1354.3
27.5°	1284.7	1300.8	1293.2	1286.7	1293.2
30°	1245.7	1265.2	1252.4	1245.9	1252.4
32.5°	1203.2	1222.7	1209.8	1201.5	1204.5
35°	1137.1	1154.5	1143.8	1132.7	1132.7
37.5°	1074.6	1085.9	1078.6	1059.9	1055.1
40°	1028.5	1041.5	1030.7	1008.4	1001.9
42.5°	980.6	993.6	981.1	956.9	946.9
45°	911.0	919.7	904.4	877.5	864.5
47.5°	839.2	848.3	827.2	797.6	782.0
50°	791.3	802.2	775.8	744.4	727.0
52.5°	745.2	752.6	727.9	691.2	675.6
55°	671.6	680.3	656.1	615.8	596.3
57.5°	602.9	611.2	582.5	544.1	528.9
60°	558.6	565.1	536.4	496.2	481.0
62.5°	508.9	515.4	488.5	453.6	438.4
65°	443.3	445.5	423.4	392.1	381.3
67.5°	381.7	381.7	363.1	339.8	331.2
70°	339.1	339.1	325.8	307.9	299.2
72.5°	300.1	298.4	290.4	277.8	270.9
75°	239.4	239.4	243.8	237.1	232.7
77.5°	186.2	182.7	201.7	200.8	198.6
80°	150.7	150.7	175.1	179.5	177.3
82.5°	118.8	122.3	153.8	160.0	157.8
85°	73.1	88.3	121.9	130.8	130.8
87.5°	33.2	60.8	98.1	110.8	111.2
90°	6.6	49.2	91.5	110.7	112.9
92.5°	27.8	53.0	91.4	115.4	123.9
95°	69.0	106.8	93.4	115.0	128.6
97.5°	109.7	179.8	377.7	148.1	137.0
100°	137.8	219.8	716.9	241.0	176.7
102.5°	164.1	250.7	953.2	566.9	326.9
105°	203.5	287.8	1070.0	1372.8	919.5
107.5°	243.0	303.6	1017.2	1981.2	1858.7
110°	269.3	327.1	987.3	2077.6	2234.2



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	297.4	355.2	959.2	2015.6	2277.5
115°	337.3	397.3	917.1	1901.4	2221.7
117.5°	377.9	439.4	906.1	1776.1	2105.6
120°	408.9	467.5	885.6	1681.0	2024.2
122.5°	432.3	493.7	862.2	1600.8	1916.6
125°	471.0	529.6	862.2	1503.9	1778.5
127.5°	502.3	564.7	863.4	1391.5	1662.7
130°	519.3	587.9	868.1	1316.3	1573.8
132.5°	539.1	607.8	866.3	1282.5	1494.2
135°	573.3	636.3	865.9	1238.6	1421.7
137.5°	602.6	670.1	865.9	1190.0	1346.8
140°	626.0	688.9	865.9	1161.6	1304.6
142.5°	649.4	707.7	870.5	1128.7	1262.5
145°	678.6	735.9	871.7	1079.1	1193.5
147.5°	713.8	764.1	878.7	1043.4	1131.5
150°	737.2	782.9	883.4	1019.7	1094.0
152.5°	760.6	801.7	883.4	1000.6	1061.3
155°	795.7	824.3	889.3	978.1	1023.8
157.5°	823.7	851.2	896.3	963.7	996.9
160°	842.5	865.3	901.0	954.3	982.9
162.5°	856.5	879.4	905.6	949.4	968.8
165°	883.4	894.9	912.7	936.5	953.6
167.5°	898.6	908.9	918.5	930.4	940.7
170°	912.7	918.4	918.5	930.3	936.1
172.5°	917.3	927.6	923.2	925.7	931.4
175°	930.2	935.9	930.2	924.2	918.5
177.5°	930.2	934.8	930.2	930.1	925.5
180°	930.2	930.2	930.2	930.2	930.2

(END OF REPORT)