

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: P644268

Luminaire Tested: CRQ4DIP-SR4F0-125D150U830-FLLOOB-1DUDD-WW

Issue Date: 2/20/2023



Test Information

Test Method: LM-79-2019
Report Number: P644268
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-SR4F0-125D150U830-FLLOOB-1DUDD-WW
Description: NEO-RAY CIRQUE SUSPENDED LED LUMINAIRE
DOWNLIGHT - CURVED FROSTED LENS - 1250 LUMENS PER FOOT
UPLIGHT - BATWING OPTIC - 1500 LUMENS PER FOOT
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

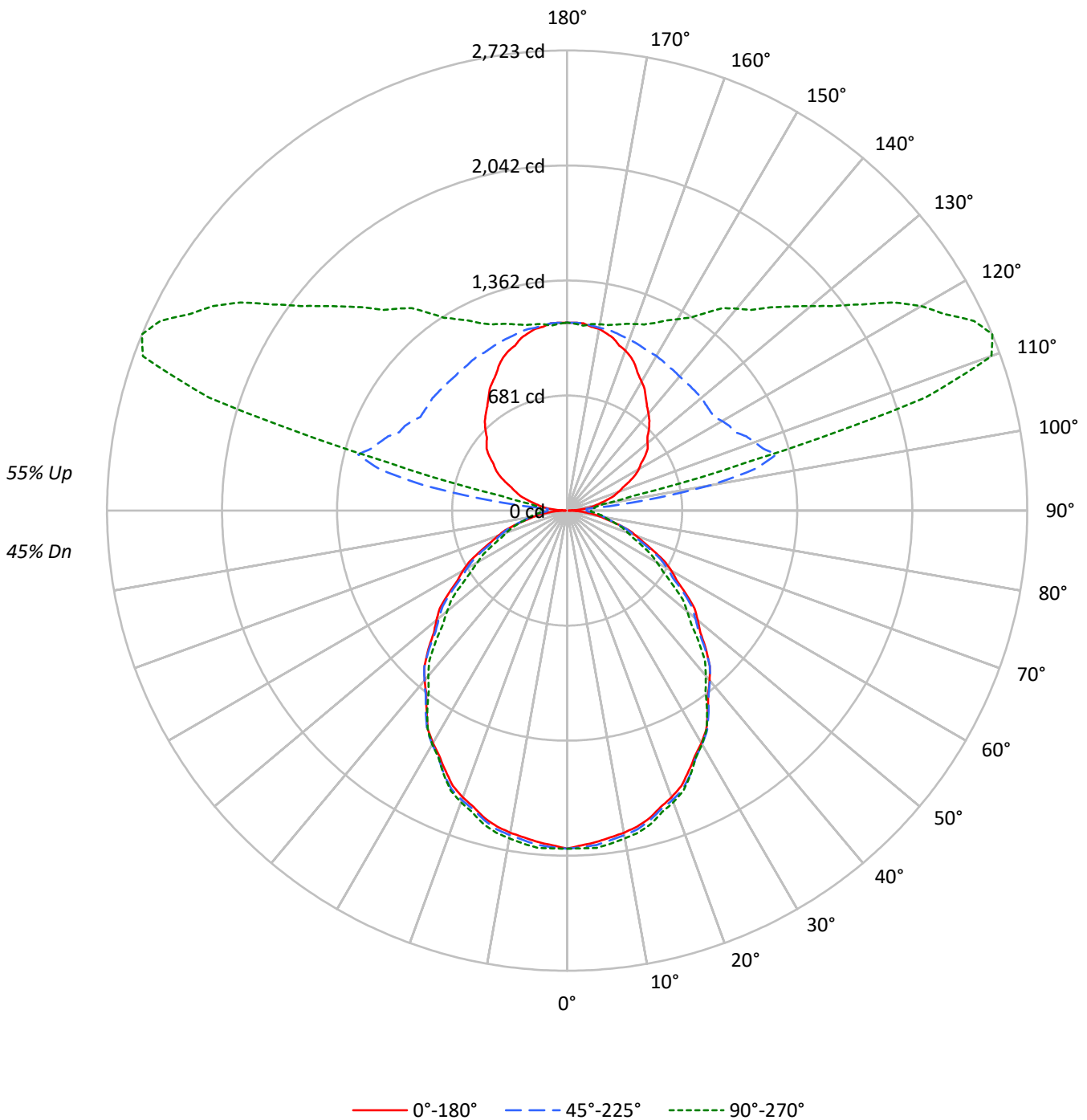
Lumens per Lamp: N/A
Luminaire Lumens: 11133.8 lumens
Efficiency: N/A
Efficacy: 125.7 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.19 / 1.3
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.33')
CIE Type: General Diffuse

Input Watts (W): 88.6
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	81	81	81	66	66	66	52	52	52	45				
1	97	92	88	85	88	85	81	78	71	68	66	58	56	54	46	45	44	38				
2	88	81	74	69	80	74	69	64	62	58	55	51	48	45	40	38	37	32				
3	80	71	64	58	73	65	59	54	55	50	46	45	41	39	36	33	31	27				
4	73	63	55	49	67	58	51	46	49	43	39	40	36	33	32	29	27	23				
5	67	56	48	42	62	52	45	39	44	38	34	36	32	29	29	26	24	20				
6	62	50	42	36	57	46	39	34	39	34	30	33	28	25	26	23	21	18				
7	57	45	37	32	53	42	35	30	36	30	26	30	25	22	24	21	19	16				
8	53	41	33	28	49	38	31	27	32	27	23	27	23	20	22	19	17	14				
9	50	38	30	25	46	35	28	24	30	24	21	25	21	18	20	17	15	13				
10	46	34	27	23	43	32	26	21	27	22	19	23	19	16	19	16	14	12				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	32300	32300	32300
5°	31688	28519	27633
10°	31273	25373	23870
15°	30815	22723	20880
20°	30109	20385	18263
25°	29170	18202	15914
30°	28247	16083	13813
35°	26995	14146	11856
40°	25828	12384	10051
45°	24477	10643	8388
50°	23048	9015	6880
55°	21536	7585	5548
60°	20092	6217	4435
65°	18316	4957	3511
70°	16606	3885	2773
75°	14523	2984	2187
80°	12129	2219	1703
85°	8843	1614	1294

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 24477 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	188.8	1.7
10°-20°	535.8	4.8
20°-30°	791.0	7.1
30°-40°	909.4	8.2
40°-50°	882.2	7.9
50°-60°	738.5	6.6
60°-70°	532.0	4.8
70°-80°	325.1	2.9
80°-90°	160.4	1.4
90°-100°	199.2	1.8
100°-110°	997.0	9.0
110°-120°	1330.7	12.0
120°-130°	1079.9	9.7
130°-140°	866.3	7.8
140°-150°	682.6	6.1
150°-160°	499.1	4.5
160°-170°	310.0	2.8
170°-180°	105.7	0.9
0°-30°	1515.6	13.6
0°-40°	2425.0	21.8
0°-60°	4045.6	36.3
0°-90°	5063.2	45.5
90°-120°	2526.9	22.7
90°-150°	5155.7	46.3
90°-180°	6071.0	54.5
0°-180°	11133.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2000	2000	2000	2000	2000	
5°	1969	2005	1986	1990	2003	187
15°	1885	1912	1896	1905	1919	530
25°	1701	1729	1724	1715	1726	784
35°	1450	1472	1458	1444	1444	908
45°	1161	1172	1153	1119	1102	895
55°	856	867	836	785	760	768
65°	565	568	540	500	486	562
75°	305	305	311	302	297	326
85°	93	113	155	167	167	98
90°	8	62	116	140	142	13
95°	84	129	115	142	159	86
105°	245	345	1280	1643	1101	259
115°	404	476	1097	2274	2656	401
125°	564	634	1031	1798	2126	501
135°	685	761	1035	1481	1700	528
145°	811	880	1042	1290	1427	510
155°	951	985	1063	1169	1224	437
165°	1056	1070	1091	1120	1140	297
175°	1112	1119	1112	1105	1098	105
180°	1112	1112	1112	1112	1112	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2000.5	2000.5	2000.5	2000.5	2000.5
2.5°	1982.4	2011.2	1993.7	1998.3	2000.5
5°	1969.4	2005.3	1986.4	1989.5	2003.3
7.5°	1951.3	1984.5	1967.7	1971.5	1987.5
10°	1935.5	1968.7	1949.6	1955.6	1969.4
12.5°	1915.2	1946.1	1931.6	1937.5	1951.3
15°	1884.7	1912.3	1896.0	1904.8	1918.6
17.5°	1839.4	1869.3	1851.9	1856.7	1870.5
20°	1805.5	1833.2	1822.5	1822.8	1836.6
22.5°	1764.9	1794.7	1786.3	1779.9	1795.9
25°	1701.0	1728.6	1723.6	1715.4	1726.4
27.5°	1637.7	1658.1	1648.4	1640.2	1648.4
30°	1588.0	1612.8	1596.4	1588.2	1596.4
32.5°	1533.7	1558.6	1542.2	1531.5	1535.4
35°	1449.5	1471.6	1458.0	1443.9	1443.9
37.5°	1369.8	1384.2	1374.9	1351.1	1345.0
40°	1311.1	1327.6	1313.9	1285.4	1277.2
42.5°	1250.0	1266.6	1250.6	1219.8	1207.1
45°	1161.3	1172.4	1152.8	1118.6	1102.0
47.5°	1069.8	1081.4	1054.5	1016.8	996.9
50°	1008.7	1022.5	989.0	948.9	926.8
52.5°	950.0	959.4	927.9	881.1	861.2
55°	856.1	867.2	836.4	784.9	760.1
57.5°	768.6	779.1	742.6	693.5	674.2
60°	712.0	720.3	683.8	632.5	613.1
62.5°	648.8	657.0	622.8	578.2	558.9
65°	565.1	567.9	539.7	499.8	486.0
67.5°	486.6	486.6	462.8	433.2	422.1
70°	432.3	432.3	415.4	392.5	381.5
72.5°	382.6	380.4	370.2	354.1	345.3
75°	305.2	305.2	310.8	302.2	296.7
77.5°	237.3	232.9	257.1	255.9	253.2
80°	192.1	192.1	223.2	228.8	226.0
82.5°	151.5	155.9	196.1	203.9	201.2
85°	93.2	112.6	155.4	166.7	166.7
87.5°	42.4	77.5	124.9	141.0	141.5
90°	8.5	62.3	115.7	139.7	142.5
92.5°	34.3	66.0	114.4	144.2	154.6
95°	84.2	129.3	115.3	142.4	158.9
97.5°	133.2	215.9	454.2	180.7	167.6
100°	166.8	263.7	859.2	291.1	214.6
102.5°	198.1	300.5	1141.2	680.2	393.5
105°	245.1	344.8	1280.1	1642.8	1101.2
107.5°	292.0	363.6	1216.5	2369.6	2223.3
110°	323.4	391.6	1180.7	2484.6	2672.0



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	356.9	425.2	1147.1	2410.2	2723.4
115°	404.5	475.5	1096.8	2273.5	2656.5
117.5°	452.8	525.8	1083.6	2123.5	2517.4
120°	489.7	559.4	1059.0	2009.7	2420.0
122.5°	517.7	590.7	1031.0	1913.8	2291.3
125°	563.9	633.6	1031.0	1798.0	2126.3
127.5°	601.0	675.4	1032.4	1663.6	1987.8
130°	621.2	703.2	1038.0	1573.7	1881.5
132.5°	644.6	726.7	1035.7	1533.3	1786.3
135°	685.4	760.7	1035.2	1480.8	1699.6
137.5°	720.4	801.1	1035.2	1422.7	1610.1
140°	748.4	823.6	1035.2	1388.8	1559.7
142.5°	776.4	846.1	1040.8	1349.3	1509.4
145°	811.3	879.7	1042.2	1290.1	1426.8
147.5°	853.3	913.5	1050.5	1247.4	1352.7
150°	881.3	936.0	1056.1	1219.0	1307.9
152.5°	909.3	958.5	1056.1	1196.3	1268.8
155°	951.2	985.4	1063.1	1169.3	1224.0
157.5°	984.8	1017.6	1071.5	1152.2	1191.8
160°	1007.2	1034.5	1077.1	1140.8	1175.0
162.5°	1024.0	1051.3	1082.7	1135.0	1158.3
165°	1056.1	1069.8	1091.1	1119.6	1140.1
167.5°	1074.3	1086.6	1098.1	1112.4	1124.7
170°	1091.1	1098.0	1098.1	1112.3	1119.1
172.5°	1096.7	1109.0	1103.7	1106.7	1113.5
175°	1112.1	1118.9	1112.1	1104.9	1098.1
177.5°	1112.1	1117.6	1112.1	1112.0	1106.5
180°	1112.1	1112.1	1112.1	1112.1	1112.1

(END OF REPORT)