

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: P644278

Luminaire Tested: CRQ4DIP-SR4F0-125D150U940-FLLOOB-1DUDD-WW

Issue Date: 2/20/2023



Test Information

Test Method: LM-79-2019
Report Number: P644278
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-SR4F0-125D150U940-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: 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

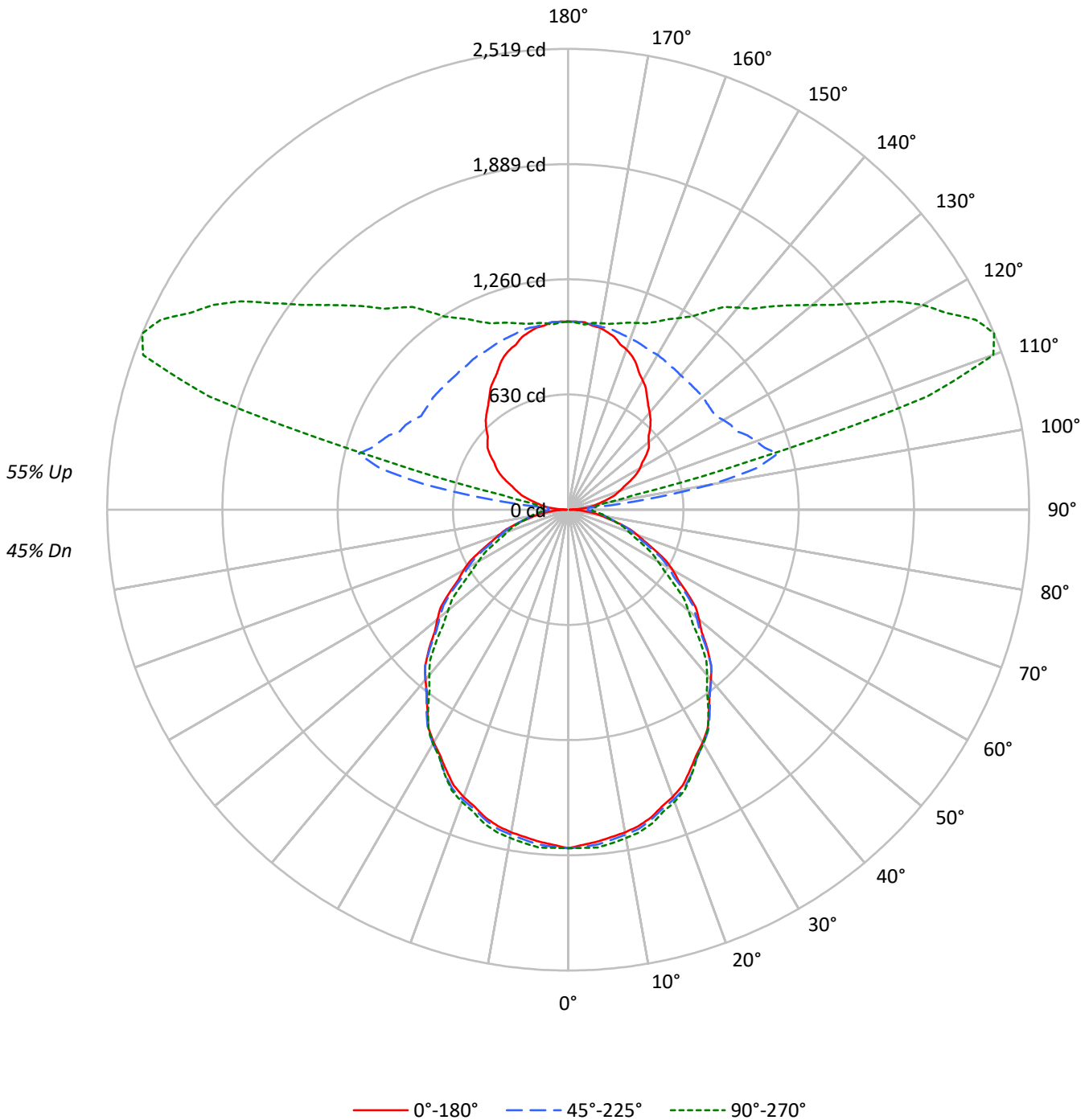
Lumens per Lamp: N/A
Luminaire Lumens: 10298.8 lumens
Efficiency: N/A
Efficacy: 116.2 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.19 / 1.3
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.33')
CIE Type: General Diffuse

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°	29878	29878	29878
5°	29312	26380	25561
10°	28928	23470	22080
15°	28504	21019	19314
20°	27851	18856	16893
25°	26982	16837	14721
30°	26128	14877	12777
35°	24971	13086	10967
40°	23889	11456	9297
45°	22641	9846	7758
50°	21321	8339	6364
55°	19921	7016	5132
60°	18585	5751	4103
65°	16942	4585	3248
70°	15361	3593	2564
75°	13433	2760	2022
80°	11220	2053	1575
85°	8188	1493	1197

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 22641 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	174.7	1.7
10°-20°	495.6	4.8
20°-30°	731.6	7.1
30°-40°	841.2	8.2
40°-50°	816.0	7.9
50°-60°	683.1	6.6
60°-70°	492.2	4.8
70°-80°	300.7	2.9
80°-90°	148.4	1.4
90°-100°	184.3	1.8
100°-110°	922.2	9.0
110°-120°	1230.9	12.0
120°-130°	998.9	9.7
130°-140°	801.3	7.8
140°-150°	631.5	6.1
150°-160°	461.7	4.5
160°-170°	286.8	2.8
170°-180°	97.8	0.9
0°-30°	1401.9	13.6
0°-40°	2243.1	21.8
0°-60°	3742.2	36.3
0°-90°	4683.5	45.5
90°-120°	2337.4	22.7
90°-150°	4769.0	46.3
90°-180°	5615.0	54.5
0°-180°	10298.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1850	1850	1850	1850	1850	
5°	1822	1855	1837	1840	1853	173
15°	1743	1769	1754	1762	1775	490
25°	1573	1599	1594	1587	1597	725
35°	1341	1361	1349	1336	1336	840
45°	1074	1084	1066	1035	1019	828
55°	792	802	774	726	703	710
65°	523	525	499	462	450	520
75°	282	282	288	280	274	302
85°	86	104	144	154	154	91
90°	8	58	107	129	132	12
95°	78	120	107	132	147	80
105°	227	319	1184	1520	1019	239
115°	374	440	1014	2103	2457	371
125°	522	586	954	1663	1967	463
135°	634	704	958	1370	1572	489
145°	750	814	964	1193	1320	471
155°	880	912	983	1082	1132	404
165°	977	990	1009	1036	1055	274
175°	1029	1035	1029	1022	1016	97
180°	1029	1029	1029	1029	1029	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1850.5	1850.5	1850.5	1850.5	1850.5
2.5°	1833.7	1860.3	1844.2	1848.4	1850.5
5°	1821.7	1854.9	1837.4	1840.3	1853.1
7.5°	1805.0	1835.7	1820.2	1823.6	1838.5
10°	1790.4	1821.0	1803.4	1808.9	1821.7
12.5°	1771.5	1800.2	1786.7	1792.2	1805.0
15°	1743.3	1768.9	1753.8	1761.9	1774.7
17.5°	1701.5	1729.1	1713.0	1717.5	1730.2
20°	1670.1	1695.7	1685.8	1686.1	1698.9
22.5°	1632.5	1660.1	1652.4	1646.4	1661.2
25°	1573.4	1599.0	1594.3	1586.7	1597.0
27.5°	1514.9	1533.8	1524.8	1517.1	1524.8
30°	1468.9	1491.9	1476.7	1469.1	1476.7
32.5°	1418.7	1441.7	1426.5	1416.7	1420.3
35°	1340.8	1361.3	1348.7	1335.6	1335.6
37.5°	1267.1	1280.4	1271.8	1249.7	1244.1
40°	1212.7	1228.1	1215.4	1189.0	1181.4
42.5°	1156.3	1171.6	1156.8	1128.3	1116.6
45°	1074.2	1084.4	1066.4	1034.7	1019.3
47.5°	989.5	1000.3	975.4	940.5	922.1
50°	933.1	945.9	914.8	877.7	857.3
52.5°	878.7	887.4	858.3	815.0	796.6
55°	791.9	802.2	773.6	726.1	703.1
57.5°	710.9	720.6	686.9	641.5	623.6
60°	658.6	666.3	632.5	585.1	567.2
62.5°	600.1	607.8	576.1	534.9	517.0
65°	522.7	525.3	499.2	462.3	449.6
67.5°	450.1	450.1	428.1	400.7	390.5
70°	399.9	399.9	384.2	363.1	352.8
72.5°	353.9	351.8	342.4	327.6	319.4
75°	282.3	282.3	287.5	279.5	274.4
77.5°	219.5	215.5	237.8	236.7	234.2
80°	177.7	177.7	206.5	211.6	209.1
82.5°	140.1	144.2	181.4	188.6	186.1
85°	86.3	104.1	143.8	154.2	154.2
87.5°	39.2	71.6	115.5	130.4	130.9
90°	7.8	57.6	107.0	129.2	131.8
92.5°	31.7	61.1	105.8	133.4	143.0
95°	77.9	119.6	106.6	131.8	147.0
97.5°	123.2	199.7	420.1	167.2	155.1
100°	154.3	243.9	794.8	269.3	198.5
102.5°	183.3	278.0	1055.6	629.1	364.0
105°	226.7	318.9	1184.1	1519.6	1018.6
107.5°	270.1	336.3	1125.3	2191.9	2056.5
110°	299.1	362.2	1092.1	2298.2	2471.6



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	330.2	393.3	1061.1	2229.4	2519.2
115°	374.1	439.8	1014.5	2103.0	2457.3
117.5°	418.9	486.4	1002.3	1964.2	2328.6
120°	453.0	517.5	979.5	1859.0	2238.5
122.5°	478.9	546.4	953.7	1770.3	2119.5
125°	521.6	586.0	953.7	1663.2	1966.8
127.5°	556.0	624.8	955.0	1538.9	1838.7
130°	574.6	650.5	960.1	1455.7	1740.4
132.5°	596.3	672.2	958.0	1418.3	1652.4
135°	634.0	703.6	957.5	1369.7	1572.2
137.5°	666.4	741.0	957.5	1316.0	1489.3
140°	692.3	761.9	957.5	1284.6	1442.8
142.5°	718.1	782.7	962.7	1248.1	1396.2
145°	750.5	813.8	964.0	1193.3	1319.8
147.5°	789.3	845.0	971.8	1153.8	1251.3
150°	815.2	865.8	976.9	1127.6	1209.8
152.5°	841.1	886.6	976.9	1106.6	1173.6
155°	879.9	911.5	983.4	1081.6	1132.2
157.5°	910.9	941.3	991.2	1065.8	1102.4
160°	931.6	957.0	996.3	1055.3	1086.9
162.5°	947.2	972.5	1001.5	1049.9	1071.4
165°	976.9	989.6	1009.3	1035.6	1054.6
167.5°	993.8	1005.1	1015.8	1029.0	1040.3
170°	1009.3	1015.6	1015.8	1028.8	1035.2
172.5°	1014.5	1025.8	1020.9	1023.7	1030.0
175°	1028.7	1035.0	1028.7	1022.1	1015.8
177.5°	1028.7	1033.8	1028.7	1028.6	1023.5
180°	1028.7	1028.7	1028.7	1028.7	1028.7

(END OF REPORT)