

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: P644312

Luminaire Tested: CRQ4DIP-SR4F0-125D75U935-FLLOOB-1DUDD-WW

Issue Date: 2/20/2023



Test Information

Test Method: LM-79-2019
Report Number: P644312
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-SR4F0-125D75U935-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: 3500K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

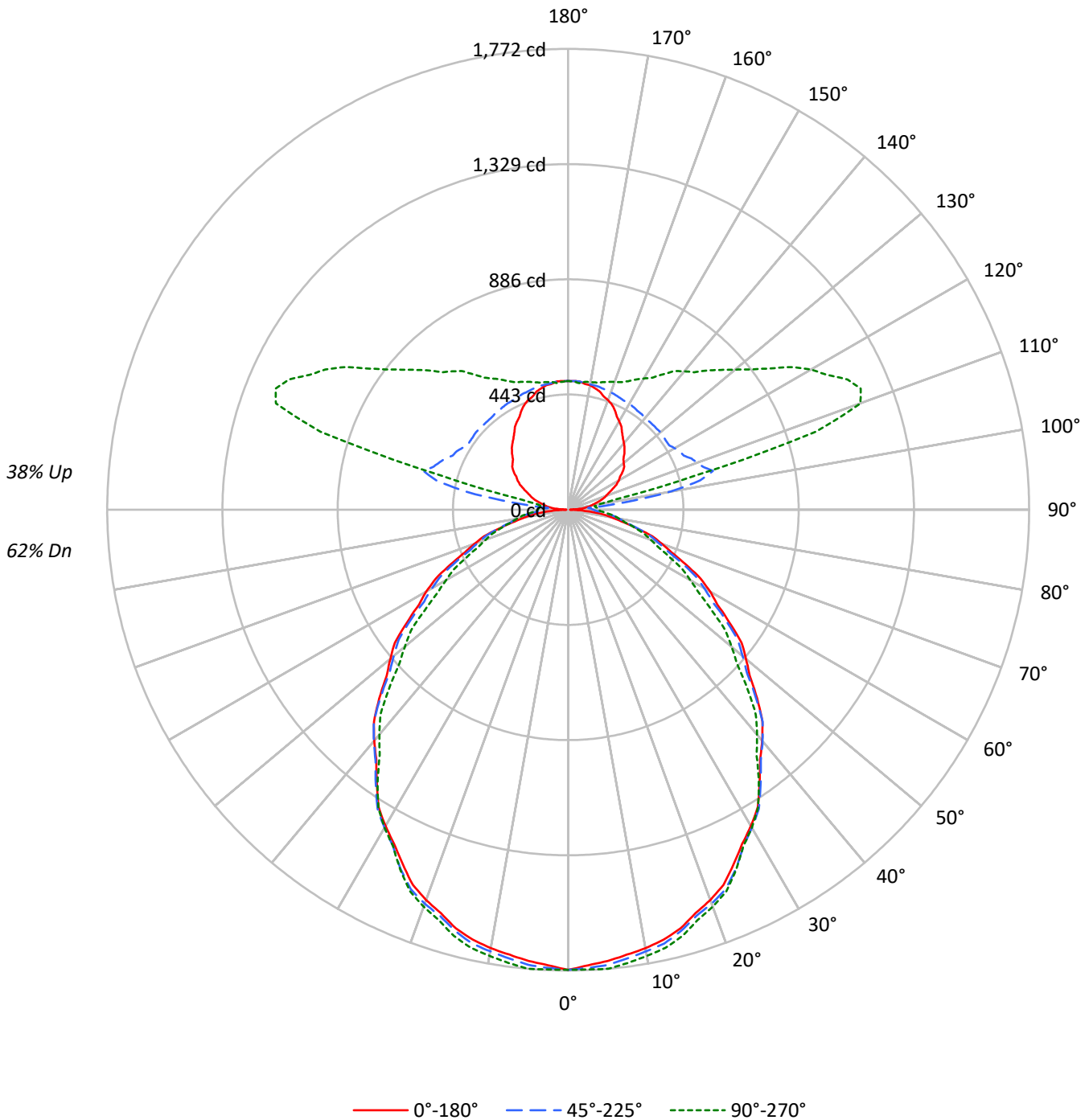
Lumens per Lamp: N/A
Luminaire Lumens: 7222.1 lumens
Efficiency: N/A
Efficacy: 118.8 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.19 / 1.3
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.33')
CIE Type: Semi-Direct

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°	28568	28568	28568
5°	28028	25224	24441
10°	27660	22442	21113
15°	27254	20097	18468
20°	26630	18029	16152
25°	25798	16099	14075
30°	24983	14226	12217
35°	23876	12511	10486
40°	22843	10954	8890
45°	21648	9414	7418
50°	20386	7973	6085
55°	19048	6708	4908
60°	17772	5499	3923
65°	16200	4384	3105
70°	14689	3436	2452
75°	12843	2639	1934
80°	10727	1962	1506
85°	7828	1427	1144

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 21648 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	167.0	2.3
10°-20°	473.9	6.6
20°-30°	699.6	9.7
30°-40°	804.3	11.1
40°-50°	780.2	10.8
50°-60°	653.1	9.0
60°-70°	470.6	6.5
70°-80°	287.5	4.0
80°-90°	140.8	1.9
90°-100°	116.2	1.6
100°-110°	453.8	6.3
110°-120°	595.9	8.3
120°-130°	482.2	6.7
130°-140°	385.8	5.3
140°-150°	303.9	4.2
150°-160°	222.2	3.1
160°-170°	138.0	1.9
170°-180°	47.1	0.7
0°-30°	1340.5	18.6
0°-40°	2144.8	29.7
0°-60°	3578.2	49.5
0°-90°	4477.1	62.0
90°-120°	1165.8	16.1
90°-150°	2337.7	32.4
90°-180°	2745.0	38.0
0°-180°	7222.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1769	1769	1769	1769	1769	
5°	1742	1774	1757	1760	1772	165
15°	1667	1691	1677	1685	1697	469
25°	1504	1529	1524	1517	1527	693
35°	1282	1302	1290	1277	1277	803
45°	1027	1037	1020	989	975	792
55°	757	767	740	694	672	679
65°	500	502	477	442	430	497
75°	270	270	275	267	262	289
85°	82	100	137	147	147	87
90°	8	52	96	114	117	10
95°	50	69	77	98	107	49
105°	122	159	576	743	504	128
115°	189	216	491	1015	1185	187
125°	256	285	460	800	947	227
135°	305	339	461	659	757	235
145°	361	392	464	574	635	227
155°	424	439	473	521	545	194
165°	470	476	486	498	508	132
175°	495	498	495	492	489	47
180°	495	495	495	495	495	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1769.4	1769.4	1769.4	1769.4	1769.4
2.5°	1753.4	1778.8	1763.4	1767.4	1769.4
5°	1741.9	1773.6	1756.9	1759.6	1771.9
7.5°	1725.9	1755.2	1740.4	1743.7	1757.9
10°	1711.9	1741.2	1724.4	1729.6	1741.9
12.5°	1693.9	1721.2	1708.4	1713.7	1725.9
15°	1666.9	1691.3	1676.9	1684.7	1696.9
17.5°	1626.9	1653.3	1637.9	1642.2	1654.4
20°	1596.9	1621.4	1611.9	1612.2	1624.4
22.5°	1560.9	1587.3	1579.9	1574.2	1588.4
25°	1504.4	1528.9	1524.4	1517.2	1526.9
27.5°	1448.5	1466.6	1458.0	1450.6	1458.0
30°	1404.5	1426.5	1412.0	1404.7	1412.0
32.5°	1356.5	1378.5	1364.0	1354.6	1358.0
35°	1282.0	1301.6	1289.5	1277.0	1277.0
37.5°	1211.6	1224.3	1216.1	1194.9	1189.6
40°	1159.6	1174.2	1162.1	1136.9	1129.6
42.5°	1105.6	1120.3	1106.1	1078.8	1067.6
45°	1027.1	1036.9	1019.6	989.3	974.6
47.5°	946.2	956.4	932.7	899.3	881.7
50°	892.2	904.4	874.7	839.2	819.7
52.5°	840.2	848.5	820.7	779.3	761.7
55°	757.2	767.0	739.7	694.2	672.3
57.5°	679.8	689.0	656.8	613.4	596.3
60°	629.8	637.1	604.8	559.4	542.3
62.5°	573.8	581.1	550.8	511.4	494.3
65°	499.8	502.3	477.3	442.1	429.8
67.5°	430.3	430.3	409.4	383.1	373.4
70°	382.4	382.4	367.4	347.2	337.4
72.5°	338.4	336.4	327.4	313.2	305.4
75°	269.9	269.9	274.9	267.3	262.4
77.5°	209.9	206.0	227.4	226.4	223.9
80°	169.9	169.9	197.4	202.4	199.9
82.5°	134.0	137.9	173.4	180.4	177.9
85°	82.5	99.6	137.4	147.4	147.4
87.5°	37.5	67.9	109.2	122.8	123.3
90°	7.5	52.1	96.2	114.4	116.8
92.5°	23.0	48.0	87.7	108.4	115.3
95°	49.9	68.8	77.4	98.2	106.7
97.5°	74.2	103.5	221.1	106.6	102.2
100°	89.2	123.8	397.4	150.7	119.1
102.5°	102.1	139.2	519.0	320.0	193.8
105°	121.5	158.6	576.1	742.6	503.9
107.5°	140.9	165.7	545.1	1061.9	998.0
110°	153.9	178.2	528.1	1111.1	1195.7

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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	168.8	193.1	513.2	1076.0	1216.6
115°	188.8	215.5	490.7	1014.6	1185.1
117.5°	208.8	237.9	484.6	946.3	1121.7
120°	224.2	252.8	472.7	894.7	1077.4
122.5°	236.7	265.8	460.2	852.0	1020.1
125°	256.0	284.6	460.2	800.5	946.6
127.5°	271.0	303.2	460.8	740.6	884.9
130°	279.0	315.5	463.3	700.6	837.6
132.5°	287.5	324.0	461.3	682.6	795.3
135°	305.2	338.6	460.8	659.2	756.7
137.5°	320.7	356.6	460.8	633.4	716.8
140°	333.2	366.7	460.8	618.3	694.4
142.5°	345.6	376.7	463.3	600.7	672.0
145°	361.2	391.6	464.0	574.3	635.2
147.5°	379.9	406.7	467.7	555.3	602.2
150°	392.3	416.7	470.2	542.7	582.3
152.5°	404.8	426.7	470.2	532.6	564.8
155°	423.5	438.7	473.3	520.6	544.9
157.5°	438.4	453.0	477.0	512.9	530.6
160°	448.4	460.6	479.5	507.9	523.1
162.5°	455.9	468.0	482.0	505.3	515.6
165°	470.2	476.3	485.8	498.4	507.5
167.5°	478.3	483.8	488.9	495.2	500.7
170°	485.8	488.8	488.9	495.2	498.2
172.5°	488.2	493.7	491.4	492.7	495.7
175°	495.1	498.1	495.1	491.9	488.9
177.5°	495.1	497.5	495.1	495.0	492.6
180°	495.1	495.1	495.1	495.1	495.1

(END OF REPORT)