

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: P735858

Luminaire Tested: S122DR-S1005D930-X4F0-XX-UDD-W-W

Issue Date: 1/24/2024

Test Information

Test Method: LM-79-2019
Report Number: P735858
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2308-143-1)
Test Lab: INNOVATION CENTER
Issue Date: 1/24/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S122DR-S1005D930-X4F0-XX-UDD-W-W
Description: DEFINE 2 DIRECT RECESSED WITH WALL WASH OPTIC
Light Source: 3000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3640.1 lumens
Efficiency: N/A
Efficacy: 87.1 lumens/watt
Spacing Criteria (0/90/45): 0.9 / 1.11 / 1.12
Luminous Opening: Rectangular (W 4' x L: 0.14' x H: 0')
CIE Type: Direct

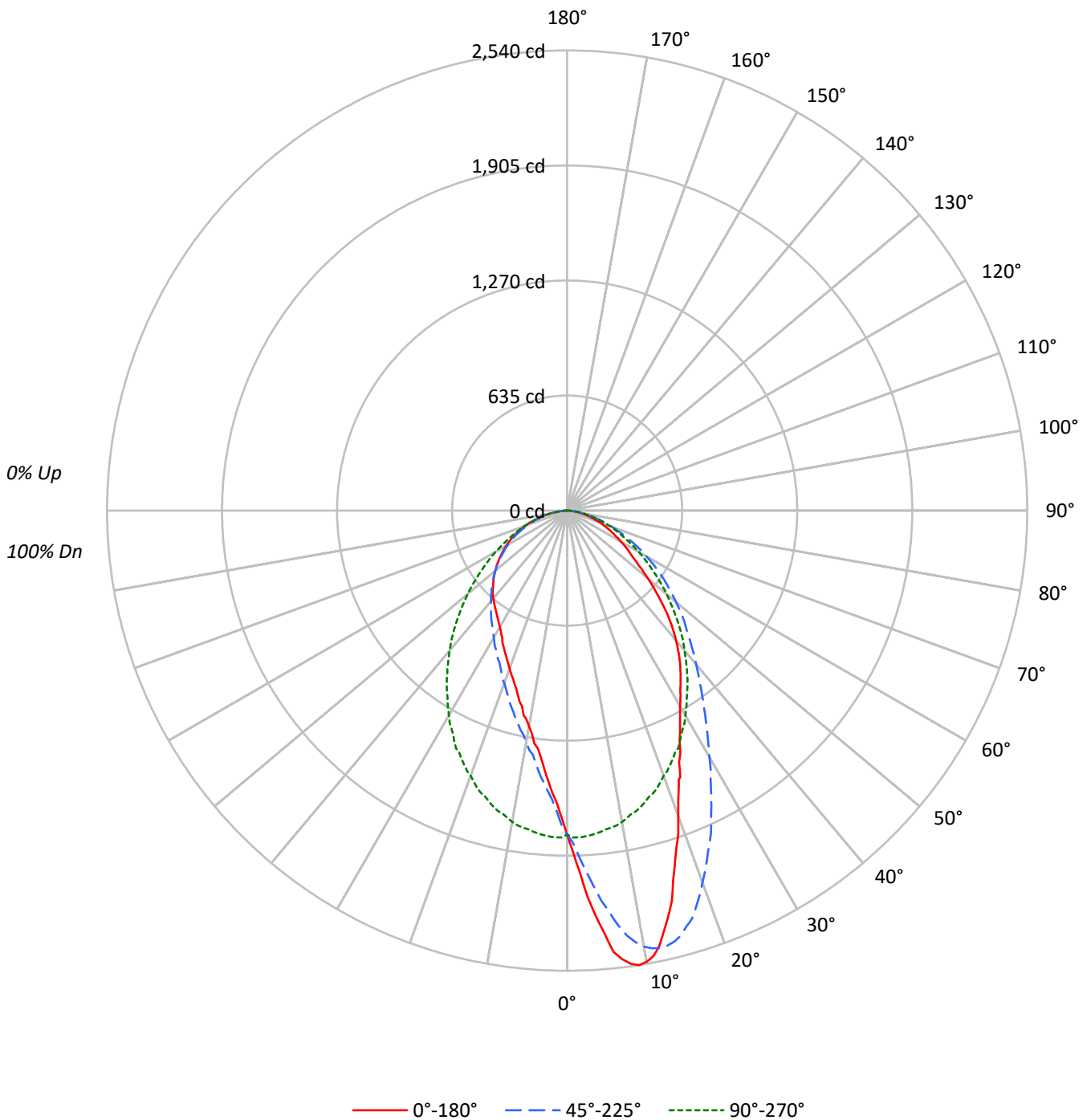
Input Watts (W): 41.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	50	30	10	0		
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100					100			
1	110	106	102	98	107	103	100	97	99	96	94	95	93	91	92	90	88					86				
2	101	94	87	82	98	92	86	81	88	83	79	85	81	78	82	79	76					74				
3	93	83	76	70	91	82	75	69	79	73	68	76	71	67	74	69	66					64				
4	86	75	67	60	83	73	66	60	71	64	59	69	63	58	67	62	58					56				
5	79	67	59	53	77	66	58	53	64	57	52	62	56	52	61	55	51					49				
6	74	61	53	47	72	60	52	47	59	52	46	57	51	46	55	50	46					44				
7	69	56	48	42	67	55	47	42	54	47	42	52	46	41	51	45	41					39				
8	64	51	43	38	63	51	43	38	50	43	38	48	42	37	47	41	37					35				
9	60	48	40	35	59	47	40	34	46	39	34	45	39	34	44	38	34					32				
10	57	44	37	32	55	44	36	32	43	36	31	42	36	31	41	35	31					30				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	34387	34387	34387	34387	34387
5°	45099	41684	34566	28990	27663
10°	49364	47709	34055	25342	23615
15°	44409	48324	33130	22878	20944
20°	36645	44694	31867	20749	18988
25°	31318	39872	30746	19194	17603
30°	27699	34821	28982	17984	16484
35°	25621	30842	27179	17139	16012
40°	23448	27829	25300	16412	15921
45°	20656	25403	23396	15910	15709
50°	17392	23420	21434	15481	15517
55°	14628	21551	19366	14956	15244
60°	13190	19475	17584	14512	14935
65°	11966	17115	15659	13813	14654
70°	10779	14786	14095	12785	13887
75°	9402	12514	12053	11600	12692
80°	7892	9796	9796	10073	10615
85°	5977	7057	7322	7873	7587

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 37300 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	176.1	4.8
10°-20°	483.2	13.3
20°-30°	633.7	17.4
30°-40°	669.8	18.4
40°-50°	621.9	17.1
50°-60°	497.7	13.7
60°-70°	340.4	9.4
70°-80°	175.7	4.8
80°-90°	41.7	1.1
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	1293.0	35.5
0°-40°	1962.7	53.9
0°-60°	3082.3	84.7
0°-90°	3640.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3640.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1789	1789	1789	1789	1789	
5°	2337	2160	1792	1502	1434	230
15°	2232	2428	1665	1150	1052	612
25°	1477	1880	1450	905	830	681
35°	1092	1314	1158	730	682	682
45°	760	934	861	585	578	584
55°	436	643	578	446	455	400
65°	263	376	344	304	322	261
75°	127	168	162	156	171	135
85°	27	32	33	36	34	33
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	1789.0	1789.0	1789.0	1789.0	1789.0	1789.0	1789.0	1789.0	1789.0
1°	1887.4	1877.6	1834.5	1837.0	1805.0	1769.4	1736.2	1715.3	1698.1
2°	1998.1	1978.4	1910.8	1877.6	1805.0	1728.8	1659.9	1641.5	1618.1
3°	2132.1	2085.4	1991.9	1913.2	1802.6	1691.9	1597.2	1564.0	1560.3
4°	2240.3	2198.5	2074.3	1950.1	1796.4	1656.2	1549.3	1513.6	1496.4
5°	2337.4	2310.4	2160.4	1996.8	1791.5	1621.8	1502.5	1453.4	1433.7
6°	2449.3	2394.0	2229.2	2043.6	1782.9	1588.6	1460.7	1401.7	1374.7
7°	2494.8	2460.4	2306.7	2074.3	1771.8	1550.5	1407.9	1343.9	1324.3
8°	2526.8	2513.3	2368.2	2124.7	1766.9	1514.8	1361.1	1321.8	1298.4
9°	2540.3	2529.2	2412.4	2145.6	1758.3	1496.4	1337.8	1272.6	1246.8
10°	2529.2	2534.2	2444.4	2177.6	1744.8	1458.3	1298.4	1241.9	1209.9
11°	2503.4	2515.7	2461.6	2214.5	1727.6	1427.5	1262.8	1205.0	1174.3
12°	2454.2	2481.3	2469.0	2240.3	1711.6	1400.5	1238.2	1182.9	1155.8
13°	2378.0	2438.3	2464.1	2251.4	1701.7	1369.8	1207.4	1143.5	1109.1
14°	2309.2	2371.9	2450.6	2276.0	1684.5	1335.3	1179.2	1115.2	1085.7
15°	2231.7	2304.2	2428.4	2283.3	1664.9	1307.0	1149.7	1079.6	1052.5
16°	2123.5	2220.6	2387.8	2291.9	1641.5	1275.1	1122.6	1056.2	1020.6
17°	2033.7	2138.2	2357.1	2296.9	1629.2	1250.5	1099.2	1020.6	997.2
18°	1951.3	2069.4	2301.8	2293.2	1609.5	1222.2	1064.8	994.7	972.6
19°	1886.2	1982.1	2246.4	2284.6	1582.5	1195.2	1039.0	976.3	950.5
20°	1791.5	1902.2	2185.0	2280.9	1557.9	1170.6	1014.4	950.5	928.3
21°	1712.8	1825.9	2128.4	2268.6	1540.7	1147.2	996.0	925.9	906.2
22.5°	1609.5	1709.1	2033.7	2245.2	1502.5	1107.9	955.4	902.5	875.5
23°	1597.2	1682.1	2009.1	2237.8	1491.5	1099.2	941.9	889.0	866.9
24°	1519.8	1609.5	1951.3	2214.5	1463.2	1072.2	919.7	873.0	847.2
25°	1476.7	1550.5	1880.0	2192.3	1449.7	1047.6	905.0	852.1	830.0
26°	1416.5	1501.3	1816.1	2160.4	1420.2	1025.5	881.6	833.7	812.8
27°	1372.2	1443.5	1749.7	2137.0	1385.7	1002.1	863.2	815.2	789.4
28°	1329.2	1398.0	1685.8	2098.9	1361.1	976.3	849.6	799.2	774.6
29°	1284.9	1345.2	1634.1	2069.4	1337.8	954.2	828.7	778.3	755.0
30°	1248.0	1303.4	1568.9	2030.0	1305.8	928.3	810.3	763.6	742.7
32.5°	1163.2	1209.9	1436.2	1936.6	1229.6	876.7	766.0	723.0	710.7
35°	1091.9	1122.6	1314.4	1832.1	1158.3	821.4	730.4	688.6	682.4
37.5°	1016.9	1046.4	1203.8	1722.6	1083.3	770.9	689.8	662.7	657.8
40°	934.5	973.8	1109.1	1614.4	1008.3	721.8	654.1	633.2	634.5
42.5°	852.1	897.6	1016.9	1487.8	938.2	675.0	619.7	605.0	607.4
45°	759.9	817.7	934.5	1372.2	860.7	630.8	585.3	577.9	577.9
47.5°	664.0	737.7	863.2	1252.9	786.9	586.5	552.1	547.2	549.6
50°	581.6	648.0	783.2	1137.4	716.8	545.9	517.7	516.4	518.9
52.5°	500.4	566.8	713.2	1029.2	645.5	509.0	484.5	484.5	486.9
55°	436.5	488.1	643.1	916.0	577.9	466.0	446.3	450.0	454.9
57.5°	392.2	426.7	574.2	807.8	515.2	424.2	411.9	414.4	420.5
60°	343.1	370.1	506.6	708.2	457.4	383.6	377.5	382.4	388.5
62.5°	298.8	322.2	442.6	618.5	394.7	344.3	341.8	349.2	355.3
65°	263.1	279.1	376.3	527.5	344.3	304.9	303.7	314.8	322.2



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	226.2	238.5	318.5	441.4	293.9	265.6	265.6	277.9	284.0
70°	191.8	201.7	263.1	364.0	250.8	226.2	227.5	242.2	247.1
72.5°	156.2	164.8	213.9	292.6	202.9	189.4	193.0	205.3	210.3
75°	126.6	132.8	168.5	231.2	162.3	151.2	156.2	167.2	170.9
77.5°	97.1	102.1	124.2	169.7	124.2	118.0	123.0	132.8	132.8
80°	71.3	72.5	88.5	119.3	88.5	84.8	91.0	95.9	95.9
82.5°	46.7	49.2	57.8	76.2	59.0	57.8	60.2	63.9	63.9
85°	27.1	28.3	32.0	41.8	33.2	33.2	35.7	35.7	34.4
87.5°	11.1	12.3	13.5	16.0	14.8	16.0	16.0	13.5	14.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)