

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: P735888

Luminaire Tested: S122DR-S675D950-X4F0-XX-UDD-W-W

Issue Date: 1/24/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P735888  
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-S675D950-X4F0-XX-UDD-W-W  
Description: DEFINE 2 DIRECT RECESSED WITH WALL WASH OPTIC  
Light Source: 5000K CCT, 90 CRI LEDS  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2824.2 lumens  
Efficiency: N/A  
Efficacy: 108.6 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

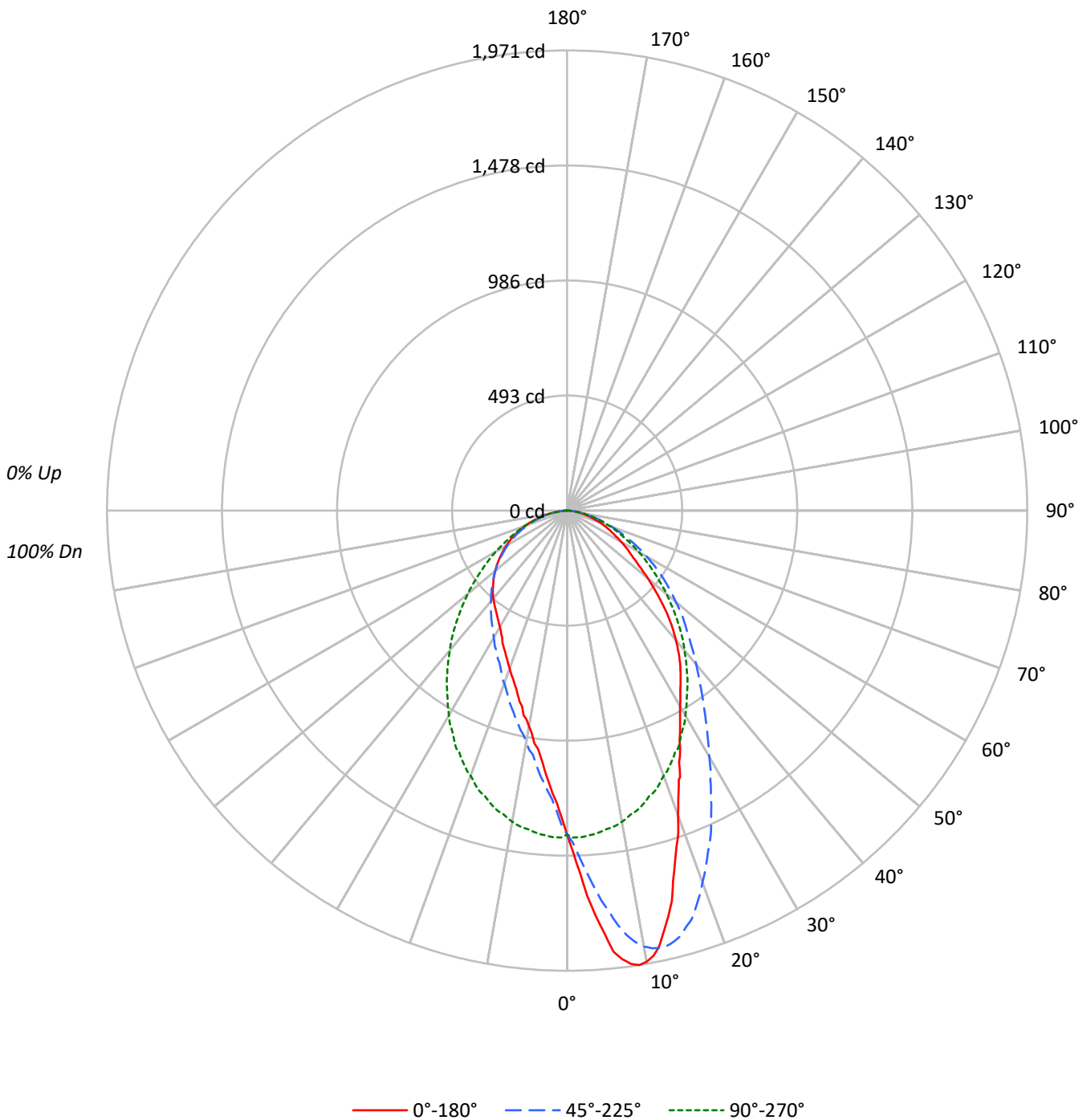
Input Watts (W): 26  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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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°	26681	26681	26681	26681	26681
5°	34993	32342	26820	22494	21463
10°	38302	37017	26421	19662	18321
15°	34456	37492	25704	17750	16250
20°	28432	34677	24724	16098	14734
25°	24301	30937	23855	14890	13656
30°	21491	27018	22486	13954	12789
35°	19879	23929	21088	13298	12425
40°	18191	21591	19629	12734	12353
45°	16027	19708	18153	12344	12189
50°	13492	18172	16632	12009	12039
55°	11350	16719	15026	11605	11829
60°	10233	15108	13643	11260	11590
65°	9287	13276	12148	10715	11366
70°	8362	11476	10936	9919	10779
75°	7300	9706	9350	9001	9848
80°	6121	7604	7604	7815	8235
85°	4631	5469	5690	6109	5888

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 67.5°  
 Vertical Angle: 45°  
 Luminance: 28942 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	136.6	4.8
10°-20°	374.9	13.3
20°-30°	491.7	17.4
30°-40°	519.7	18.4
40°-50°	482.5	17.1
50°-60°	386.2	13.7
60°-70°	264.1	9.4
70°-80°	136.3	4.8
80°-90°	32.4	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°	1003.2	35.5
0°-40°	1522.8	53.9
0°-60°	2391.5	84.7
0°-90°	2824.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2824.2	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1388	1388	1388	1388	1388	
5°	1814	1676	1390	1166	1112	179
15°	1732	1884	1292	892	817	475
25°	1146	1459	1125	702	644	528
35°	847	1020	899	567	530	529
45°	590	725	668	454	448	453
55°	339	499	448	346	353	310
65°	204	292	267	236	250	203
75°	98	131	126	121	133	105
85°	21	25	26	28	27	25
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°	1388.1	1388.1	1388.1	1388.1	1388.1	1388.1	1388.1	1388.1	1388.1
1°	1464.4	1456.8	1423.4	1425.3	1400.5	1372.8	1347.0	1330.8	1317.5
2°	1550.2	1535.0	1482.5	1456.8	1400.5	1341.3	1287.9	1273.6	1255.5
3°	1654.2	1618.0	1545.5	1484.4	1398.6	1312.7	1239.2	1213.5	1210.6
4°	1738.2	1705.8	1609.4	1513.0	1393.8	1285.0	1202.0	1174.4	1161.0
5°	1813.6	1792.6	1676.2	1549.3	1390.0	1258.3	1165.8	1127.6	1112.4
6°	1900.4	1857.4	1729.6	1585.5	1383.3	1232.6	1133.4	1087.6	1066.6
7°	1935.7	1909.0	1789.7	1609.4	1374.7	1203.0	1092.3	1042.7	1027.5
8°	1960.5	1950.0	1837.4	1648.5	1370.9	1175.3	1056.1	1025.5	1007.4
9°	1971.0	1962.4	1871.7	1664.7	1364.2	1161.0	1038.0	987.4	967.4
10°	1962.4	1966.2	1896.6	1689.5	1353.7	1131.4	1007.4	963.5	938.7
11°	1942.3	1951.9	1909.9	1718.2	1340.4	1107.6	979.8	934.9	911.1
12°	1904.2	1925.2	1915.6	1738.2	1328.0	1086.6	960.7	917.7	896.8
13°	1845.0	1891.8	1911.8	1746.8	1320.3	1062.8	936.8	887.2	860.5
14°	1791.6	1840.3	1901.3	1765.9	1307.0	1036.0	914.9	865.3	842.4
15°	1731.5	1787.8	1884.1	1771.6	1291.7	1014.1	892.0	837.6	816.6
16°	1647.6	1722.9	1852.7	1778.3	1273.6	989.3	871.0	819.5	791.8
17°	1577.9	1659.0	1828.8	1782.1	1264.0	970.2	852.9	791.8	773.7
18°	1514.0	1605.6	1785.9	1779.2	1248.8	948.3	826.2	771.8	754.6
19°	1463.4	1537.8	1743.0	1772.5	1227.8	927.3	806.1	757.5	737.4
20°	1390.0	1475.8	1695.3	1769.7	1208.7	908.2	787.0	737.4	720.3
21°	1328.9	1416.7	1651.4	1760.1	1195.4	890.1	772.7	718.4	703.1
22.5°	1248.8	1326.1	1577.9	1742.0	1165.8	859.6	741.3	700.2	679.2
23°	1239.2	1305.1	1558.8	1736.3	1157.2	852.9	730.8	689.7	672.6
24°	1179.1	1248.8	1514.0	1718.2	1135.3	831.9	713.6	677.3	657.3
25°	1145.8	1203.0	1458.7	1701.0	1124.8	812.8	702.1	661.1	643.9
26°	1099.0	1164.8	1409.1	1676.2	1101.9	795.6	684.0	646.8	630.6
27°	1064.7	1120.0	1357.5	1658.1	1075.2	777.5	669.7	632.5	612.5
28°	1031.3	1084.7	1307.9	1628.5	1056.1	757.5	659.2	620.1	601.0
29°	996.9	1043.7	1267.9	1605.6	1038.0	740.3	643.0	603.9	585.8
30°	968.3	1011.2	1217.3	1575.1	1013.1	720.3	628.7	592.4	576.2
32.5°	902.5	938.7	1114.3	1502.5	954.0	680.2	594.3	561.0	551.4
35°	847.2	871.0	1019.8	1421.5	898.7	637.3	566.7	534.2	529.5
37.5°	789.0	811.9	934.0	1336.6	840.5	598.2	535.2	514.2	510.4
40°	725.0	755.6	860.5	1252.6	782.3	560.0	507.5	491.3	492.3
42.5°	661.1	696.4	789.0	1154.3	727.9	523.7	480.8	469.4	471.3
45°	589.6	634.4	725.0	1064.7	667.8	489.4	454.1	448.4	448.4
47.5°	515.2	572.4	669.7	972.1	610.6	455.1	428.3	424.5	426.4
50°	451.2	502.8	607.7	882.4	556.2	423.6	401.6	400.7	402.6
52.5°	388.3	439.8	553.3	798.5	500.8	395.0	375.9	375.9	377.8
55°	338.7	378.7	498.9	710.7	448.4	361.6	346.3	349.2	353.0
57.5°	304.3	331.0	445.5	626.8	399.7	329.1	319.6	321.5	326.3
60°	266.2	287.2	393.0	549.5	354.9	297.6	292.9	296.7	301.5
62.5°	231.8	249.9	343.4	479.9	306.2	267.1	265.2	270.9	275.7
65°	204.2	216.6	291.9	409.3	267.1	236.6	235.6	244.2	249.9



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	175.5	185.1	247.1	342.5	228.0	206.1	206.1	215.6	220.4
70°	148.8	156.5	204.2	282.4	194.6	175.5	176.5	187.9	191.8
72.5°	121.2	127.8	166.0	227.1	157.4	146.9	149.8	159.3	163.1
75°	98.3	103.0	130.7	179.4	125.9	117.3	121.2	129.7	132.6
77.5°	75.4	79.2	96.4	131.7	96.4	91.6	95.4	103.0	103.0
80°	55.3	56.3	68.7	92.5	68.7	65.8	70.6	74.4	74.4
82.5°	36.3	38.2	44.8	59.1	45.8	44.8	46.7	49.6	49.6
85°	21.0	21.9	24.8	32.4	25.8	25.8	27.7	27.7	26.7
87.5°	8.6	9.5	10.5	12.4	11.4	12.4	12.4	10.5	11.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)