

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: P735880

Luminaire Tested: S122DR-S675D830-X4F0-XX-UDD-W-W

Issue Date: 1/24/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P735880  
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-S675D830-X4F0-XX-UDD-W-W  
Description: DEFINE 2 DIRECT RECESSED WITH WALL WASH OPTIC  
Light Source: 3000K CCT, 80 CRI LEDS  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2790.3 lumens  
Efficiency: N/A  
Efficacy: 107.3 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

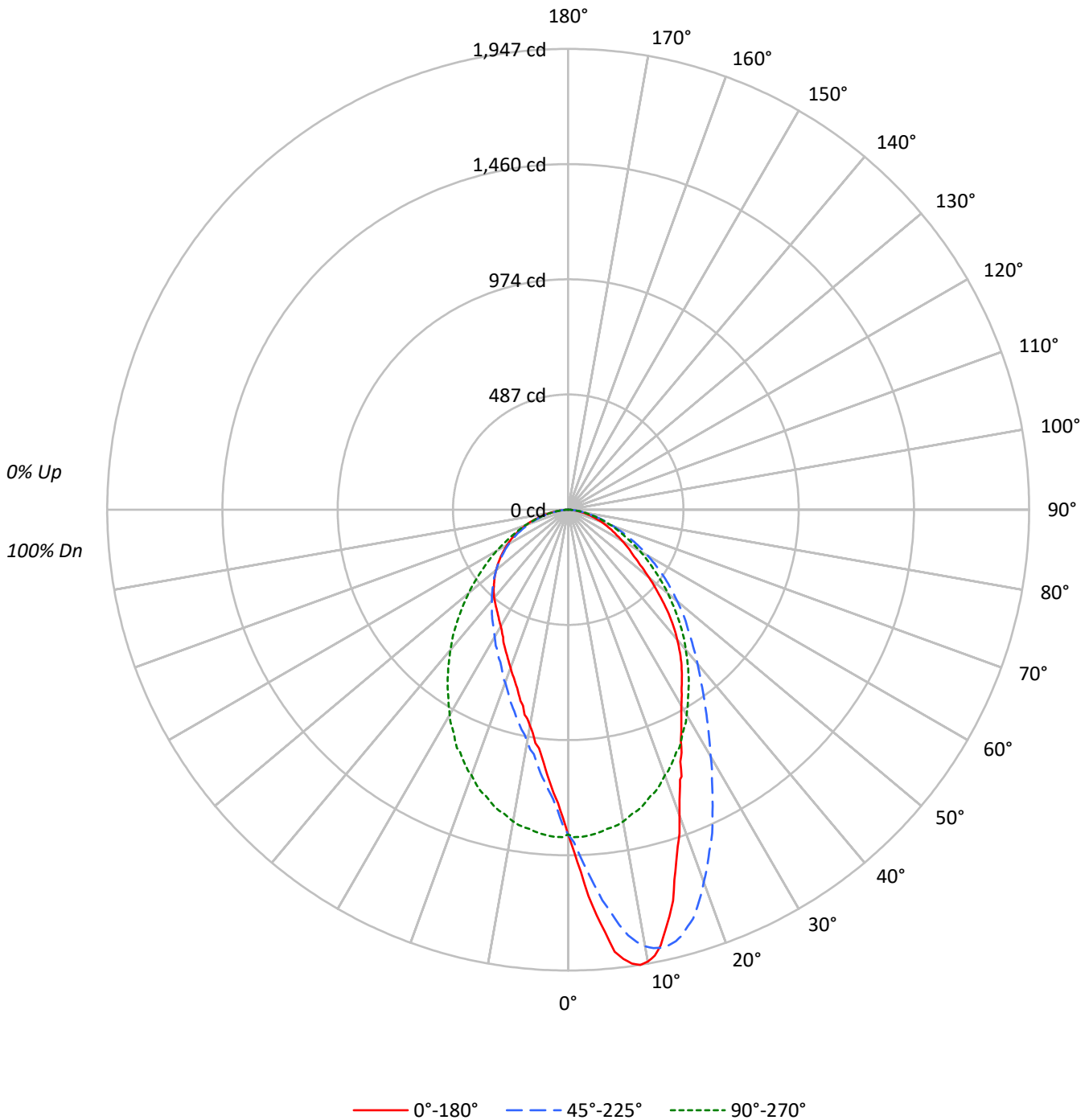
Input Watts (W): 26  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°	135°	180°
0°	26360	26360	26360	26360	26360
5°	34572	31952	26497	22224	21205
10°	37841	36572	26105	19426	18103
15°	34042	37043	25396	17537	16055
20°	28091	34260	24427	15906	14556
25°	24008	30563	23569	14712	13493
30°	21234	26694	22217	13785	12636
35°	19640	23643	20834	13138	12274
40°	17973	21333	19393	12581	12205
45°	15834	19471	17935	12194	12042
50°	13331	17954	16432	11866	11895
55°	11213	16518	14845	11464	11685
60°	10110	14927	13478	11125	11448
65°	9174	13117	12003	10588	11229
70°	8261	11335	10807	9801	10650
75°	7211	9588	9239	8890	9729
80°	6055	7516	7516	7715	8136
85°	4565	5403	5602	6021	5822

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 67.5°  
 Vertical Angle: 45°  
 Luminance: 28594 cd/sqm

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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	135.0	4.8
10°-20°	370.4	13.3
20°-30°	485.8	17.4
30°-40°	513.4	18.4
40°-50°	476.7	17.1
50°-60°	381.5	13.7
60°-70°	260.9	9.4
70°-80°	134.6	4.8
80°-90°	32.0	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°	991.1	35.5
0°-40°	1504.5	53.9
0°-60°	2362.8	84.7
0°-90°	2790.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2790.3	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1371	1371	1371	1371	1371	
5°	1792	1656	1373	1152	1099	177
15°	1711	1862	1276	881	807	470
25°	1132	1441	1111	694	636	522
35°	837	1008	888	560	523	522
45°	582	716	660	449	443	447
55°	335	493	443	342	349	307
65°	202	288	264	233	247	200
75°	97	129	124	120	131	103
85°	21	24	25	27	26	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°	1371.4	1371.4	1371.4	1371.4	1371.4	1371.4	1371.4	1371.4	1371.4
1°	1446.8	1439.3	1406.3	1408.2	1383.7	1356.3	1330.9	1314.8	1301.6
2°	1531.6	1516.5	1464.7	1439.3	1383.7	1325.2	1272.4	1258.3	1240.4
3°	1634.4	1598.6	1526.9	1466.6	1381.8	1296.9	1224.4	1198.9	1196.1
4°	1717.3	1685.3	1590.1	1494.9	1377.1	1269.6	1187.6	1160.3	1147.1
5°	1791.8	1771.0	1656.0	1530.7	1373.3	1243.2	1151.8	1114.1	1099.0
6°	1877.5	1835.1	1708.8	1566.5	1366.7	1217.8	1119.7	1074.5	1053.8
7°	1912.4	1886.0	1768.2	1590.1	1358.2	1188.5	1079.2	1030.2	1015.1
8°	1936.9	1926.6	1815.3	1628.7	1354.4	1161.2	1043.4	1013.2	995.3
9°	1947.3	1938.8	1849.3	1644.7	1347.8	1147.1	1025.5	975.5	955.7
10°	1938.8	1942.6	1873.8	1669.2	1337.5	1117.9	995.3	952.0	927.5
11°	1919.0	1928.4	1887.0	1697.5	1324.3	1094.3	968.0	923.7	900.1
12°	1881.3	1902.0	1892.6	1717.3	1312.0	1073.6	949.1	906.7	886.0
13°	1822.9	1869.1	1888.9	1725.8	1304.5	1050.0	925.6	876.6	850.2
14°	1770.1	1818.2	1878.5	1744.6	1291.3	1023.6	903.9	854.9	832.3
15°	1710.7	1766.3	1861.5	1750.3	1276.2	1001.9	881.3	827.6	806.8
16°	1627.8	1702.2	1830.4	1756.9	1258.3	977.4	860.5	809.6	782.3
17°	1559.0	1639.1	1806.9	1760.7	1248.9	958.6	842.6	782.3	764.4
18°	1495.8	1586.3	1764.4	1757.8	1233.8	936.9	816.2	762.5	745.6
19°	1445.9	1519.4	1722.0	1751.2	1213.1	916.2	796.4	748.4	728.6
20°	1373.3	1458.1	1674.9	1748.4	1194.2	897.3	777.6	728.6	711.6
21°	1313.0	1399.7	1631.5	1739.0	1181.0	879.4	763.5	709.7	694.7
22.5°	1233.8	1310.1	1559.0	1721.1	1151.8	849.2	732.4	691.8	671.1
23°	1224.4	1289.4	1540.1	1715.4	1143.3	842.6	722.0	681.5	664.5
24°	1165.0	1233.8	1495.8	1697.5	1121.6	821.9	705.0	669.2	649.4
25°	1132.0	1188.5	1441.1	1680.6	1111.3	803.0	693.7	653.2	636.2
26°	1085.8	1150.8	1392.1	1656.0	1088.6	786.1	675.8	639.0	623.0
27°	1051.9	1106.5	1341.2	1638.1	1062.2	768.2	661.7	624.9	605.1
28°	1018.9	1071.7	1292.2	1608.9	1043.4	748.4	651.3	612.7	593.8
29°	985.0	1031.1	1252.6	1586.3	1025.5	731.4	635.3	596.6	578.7
30°	956.7	999.1	1202.7	1556.1	1001.0	711.6	621.1	585.3	569.3
32.5°	891.6	927.5	1100.9	1484.5	942.5	672.0	587.2	554.2	544.8
35°	837.0	860.5	1007.6	1404.4	887.9	629.6	559.9	527.8	523.1
37.5°	779.5	802.1	922.7	1320.5	830.4	591.0	528.8	508.0	504.3
40°	716.3	746.5	850.2	1237.6	772.9	553.3	501.4	485.4	486.4
42.5°	653.2	688.1	779.5	1140.5	719.2	517.5	475.0	463.7	465.6
45°	582.5	626.8	716.3	1051.9	659.8	483.5	448.6	443.0	443.0
47.5°	509.0	565.5	661.7	960.4	603.2	449.6	423.2	419.4	421.3
50°	445.8	496.7	600.4	871.9	549.5	418.5	396.8	395.9	397.8
52.5°	383.6	434.5	546.7	788.9	494.8	390.2	371.4	371.4	373.2
55°	334.6	374.2	492.9	702.2	443.0	357.2	342.1	345.0	348.7
57.5°	300.7	327.1	440.2	619.2	394.9	325.2	315.8	317.6	322.3
60°	263.0	283.7	388.3	542.9	350.6	294.1	289.4	293.1	297.8
62.5°	229.0	246.9	339.3	474.1	302.6	263.9	262.0	267.7	272.4
65°	201.7	214.0	288.4	404.4	263.9	233.8	232.8	241.3	246.9



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	173.4	182.9	244.1	338.4	225.3	203.6	203.6	213.0	217.7
70°	147.0	154.6	201.7	279.0	192.3	173.4	174.4	185.7	189.5
72.5°	119.7	126.3	164.0	224.3	155.5	145.2	148.0	157.4	161.2
75°	97.1	101.8	129.1	177.2	124.4	115.9	119.7	128.2	131.0
77.5°	74.5	78.2	95.2	130.1	95.2	90.5	94.3	101.8	101.8
80°	54.7	55.6	67.9	91.4	67.9	65.0	69.7	73.5	73.5
82.5°	35.8	37.7	44.3	58.4	45.2	44.3	46.2	49.0	49.0
85°	20.7	21.7	24.5	32.0	25.4	25.4	27.3	27.3	26.4
87.5°	8.5	9.4	10.4	12.3	11.3	12.3	12.3	10.4	11.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)