

Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269



Scaled data based on original data using  
LM-79-2024 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: S122DRP-S675D830-X4F0-XX-UDD-W-W

Issue Date: 1/24/2024

**Test Information**

Test Method: LM-79-2024  
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: S122DRP-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**

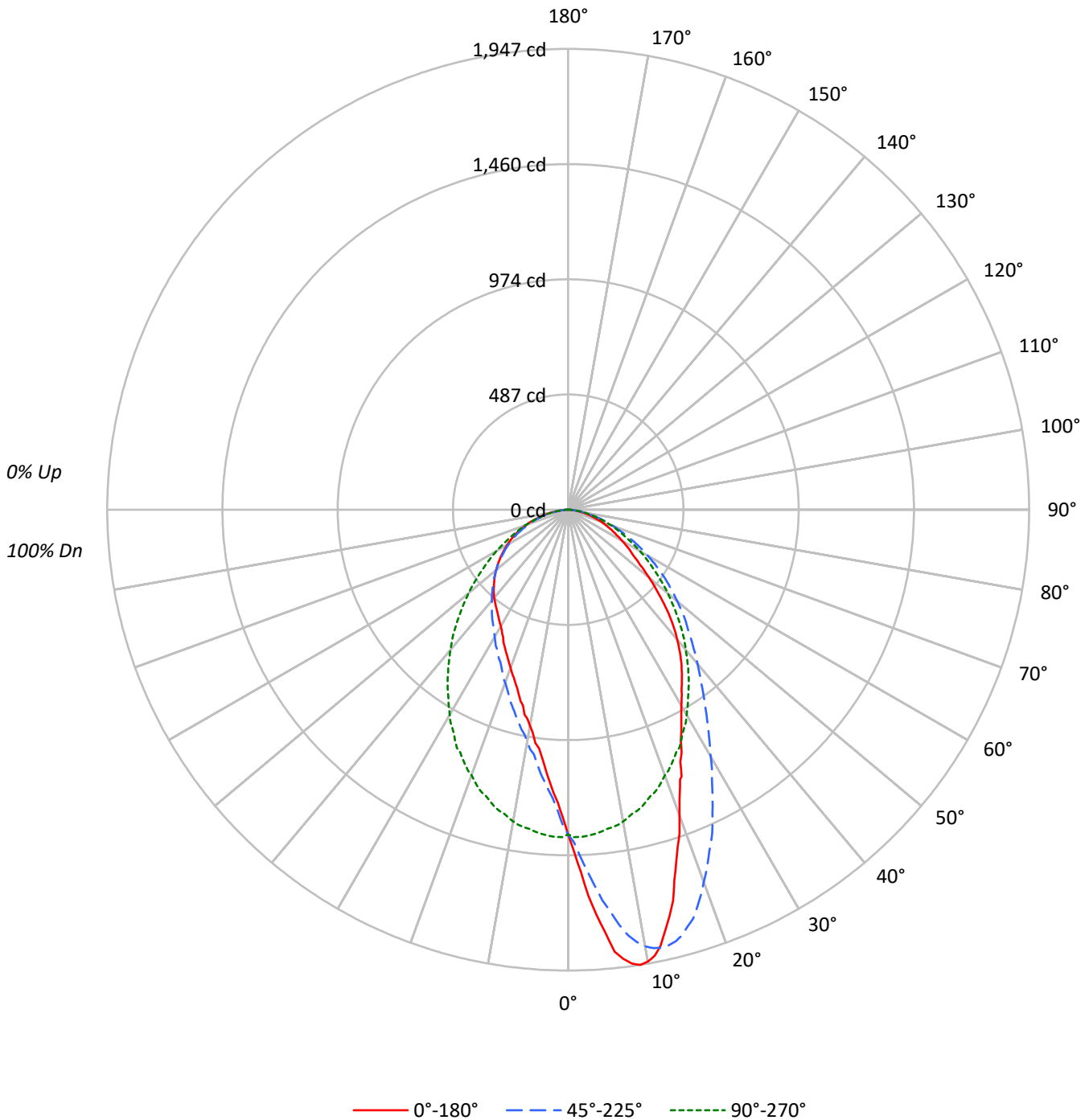
Lumens per Lamp: N/A  
Luminaire Lumens: 2790.3 lumens  
Efficiency: N/A  
Efficacy: 107.3 lumens/watt  
Spacing Criteria (0/90/45): 0.9 / 1.11 / 1.12  
Luminous Opening: Rectangular (W 4' x L: 0.14' x H: 0')  
CIE Type: Direct

Input Watts (W): 26  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): 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	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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CATALOG NUMBER: S122DRP-S675D830-X4F0-XX-UDD-W-W

**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



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**CIE UGR TABLE:**

Reflectances:											
Ceiling		0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
Wall		0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
Reference plane		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room dimensions		Viewed crosswise					Viewed endwise				
X=2H	Y=2H	20.59	22.11	20.95	22.42	22.74	20.16	21.68	20.53	22.00	22.31
	3H	21.79	23.16	22.17	23.48	23.84	21.68	23.04	22.05	23.37	23.73
	4H	22.19	23.47	22.59	23.82	24.20	22.20	23.48	22.60	23.83	24.21
	6H	22.44	23.62	22.85	23.99	24.38	22.55	23.74	22.97	24.11	24.50
	8H	22.50	23.63	22.93	24.02	24.42	22.65	23.78	23.08	24.17	24.57
	12H	22.53	23.61	22.96	23.99	24.42	22.70	23.78	23.13	24.17	24.60
4H	2H	21.64	22.93	22.04	23.28	23.65	21.23	22.52	21.63	22.86	23.24
	3H	23.01	24.07	23.42	24.47	24.87	22.86	23.92	23.27	24.32	24.73
	4H	23.47	24.43	23.90	24.84	25.28	23.44	24.40	23.87	24.81	25.25
	6H	23.78	24.61	24.24	25.06	25.52	23.86	24.69	24.32	25.14	25.60
	8H	23.86	24.64	24.32	25.08	25.55	23.98	24.76	24.44	25.20	25.67
	12H	23.91	24.60	24.39	25.08	25.55	24.05	24.75	24.53	25.23	25.70
8H	4H	23.82	24.60	24.29	25.05	25.51	23.78	24.56	24.24	25.00	25.47
	6H	24.23	24.87	24.72	25.36	25.84	24.30	24.94	24.80	25.44	25.91
	8H	24.35	24.92	24.86	25.43	25.92	24.47	25.04	24.98	25.55	26.04
	12H	24.43	24.94	24.94	25.44	26.00	24.59	25.10	25.10	25.59	26.16
12H	4H	23.85	24.54	24.33	25.02	25.49	23.80	24.49	24.28	24.97	25.44
	6H	24.27	24.85	24.78	25.36	25.85	24.34	24.92	24.86	25.43	25.92
	8H	24.44	24.95	24.95	25.44	26.01	24.56	25.07	25.07	25.56	26.13