

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: P735925

Luminaire Tested: S122RDRP-S675D830-X4F0-XX-UDD-W-W

Issue Date: 1/24/2024

**Test Information**

Test Method: LM-79-2024  
Report Number: P735925  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2308-143-2)  
Test Lab: INNOVATION CENTER  
Issue Date: 1/24/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S122RDRP-S675D830-X4F0-XX-UDD-W-W  
Description: DEFINE 2 REGRESSED DIRECT RECESSED WITH WALL WASH OPTIC  
Light Source: 3000K CCT, 80 CRI LEDS  
Ballast/Driver: -

**Summary**

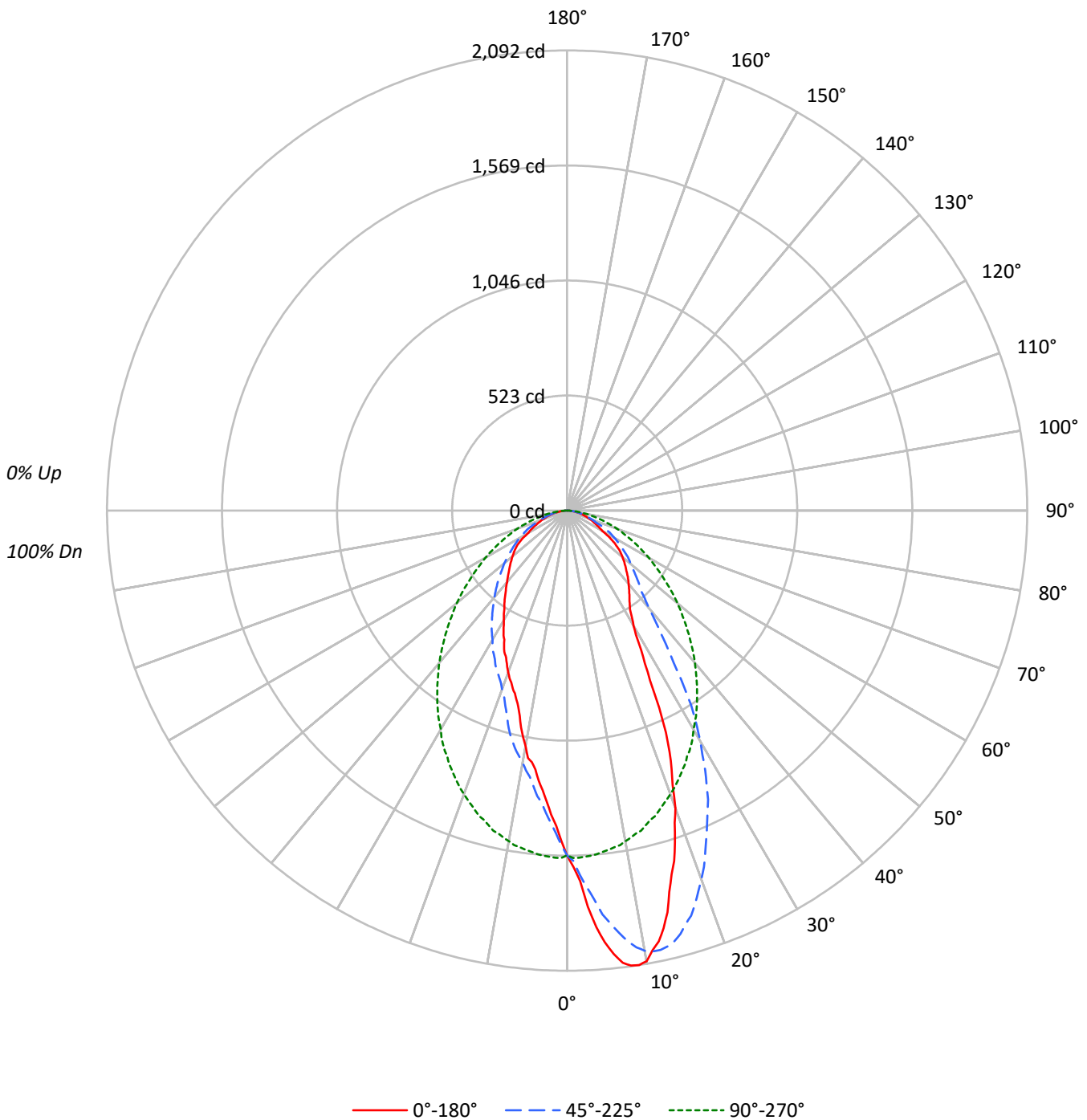
Lumens per Lamp: N/A  
Luminaire Lumens: 2685.8 lumens  
Efficiency: N/A  
Efficacy: 102.1 lumens/watt  
Spacing Criteria (0/90/45): 0.82 / 1.11 / 1  
Luminous Opening: Rectangular (W 4' x L: 0.14' x H: 0')  
CIE Type: Direct

Input Watts (W): 26.3  
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	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	103	99	108	104	101	98	100	97	95	96	94	92	92	91	89	87				87
2	102	95	89	84	99	93	87	83	89	85	81	86	82	79	83	80	77	75				75
3	94	85	78	72	92	83	77	71	80	75	70	78	73	69	75	71	68	66				66
4	87	77	69	63	85	75	68	62	73	67	62	71	65	61	69	64	60	58				58
5	81	69	61	55	79	68	61	55	66	60	55	64	59	54	63	58	54	52				52
6	75	63	55	50	74	63	55	49	61	54	49	59	53	49	58	52	48	46				46
7	71	58	50	45	69	57	50	45	56	49	44	55	49	44	53	48	44	42				42
8	66	54	46	41	65	53	46	41	52	45	40	51	45	40	50	44	40	38				38
9	62	50	42	37	61	49	42	37	48	42	37	47	41	37	46	41	37	35				35
10	59	46	39	34	57	46	39	34	45	39	34	44	38	34	43	38	34	32				32

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

	0°	45°	90°	135°	180°
0°	30127	30127	30127	30127	30127
5°	38009	35554	30243	25697	24607
10°	40601	39645	29784	22738	21247
15°	35711	39632	28997	20387	17706
20°	29441	36477	28070	17700	16022
25°	20990	32025	26945	16392	14413
30°	13430	26860	25502	15041	12802
35°	11566	19795	24173	13955	11610
40°	10902	14473	22680	12912	10666
45°	10300	12401	21086	11966	10069
50°	9808	11303	19589	11133	9695
55°	9001	10456	17908	10234	9350
60°	7100	9530	16450	9603	7900
65°	6431	8532	14918	8914	7200
70°	5935	6884	13561	7682	6620
75°	5533	6231	11830	6862	6231
80°	5114	5634	10018	6154	5634
85°	4565	4984	7697	5403	4984

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 67.5°  
 Vertical Angle: 45°  
 Luminance: 29515 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	152.0	5.7
10°-20°	408.5	15.2
20°-30°	512.4	19.1
30°-40°	488.2	18.2
40°-50°	430.7	16.0
50°-60°	338.8	12.6
60°-70°	216.2	8.0
70°-80°	109.9	4.1
80°-90°	29.1	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°	1072.9	39.9
0°-40°	1561.1	58.1
0°-60°	2330.5	86.8
0°-90°	2685.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2685.8	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1567	1567	1567	1567	1567	
5°	1970	1843	1567	1332	1275	191
15°	1795	1992	1457	1024	890	497
25°	990	1510	1270	773	680	446
35°	493	844	1030	595	495	313
45°	379	456	776	440	370	294
55°	269	312	534	305	279	236
65°	141	188	328	196	158	141
75°	74	84	159	92	84	79
85°	21	23	35	24	23	23
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°	1567.4	1567.4	1567.4	1567.4	1567.4	1567.4	1567.4	1567.4	1567.4
1°	1620.2	1627.8	1592.9	1596.7	1579.7	1549.5	1520.3	1523.1	1502.4
2°	1685.3	1705.1	1657.0	1627.8	1578.8	1526.0	1467.5	1460.0	1434.6
3°	1803.1	1793.7	1714.5	1655.1	1575.0	1495.8	1422.3	1405.3	1383.7
4°	1898.3	1870.0	1772.9	1690.0	1573.1	1460.9	1378.0	1348.8	1327.1
5°	1969.9	1934.1	1842.7	1716.4	1567.4	1441.1	1331.8	1298.8	1275.3
6°	2027.4	2000.1	1887.9	1740.9	1559.9	1411.9	1304.5	1260.2	1235.7
7°	2071.7	2049.1	1934.1	1773.9	1553.3	1382.7	1261.1	1214.9	1185.7
8°	2088.7	2078.3	1976.5	1797.4	1545.8	1362.0	1222.5	1181.0	1154.6
9°	2091.5	2092.4	2010.4	1820.1	1539.2	1324.3	1195.1	1152.7	1138.6
10°	2080.2	2088.7	2031.2	1845.5	1526.0	1305.4	1165.0	1124.5	1088.6
11°	2035.9	2073.6	2041.5	1862.5	1514.7	1275.3	1138.6	1085.8	1050.0
12°	2002.9	2038.7	2042.5	1884.1	1501.5	1261.1	1116.0	1045.3	1007.6
13°	1948.2	1985.9	2033.1	1889.8	1493.9	1226.2	1087.7	1003.8	957.6
14°	1883.2	1943.5	2018.0	1902.1	1475.1	1196.1	1059.4	945.4	918.0
15°	1794.6	1880.4	1991.6	1906.8	1457.2	1175.4	1024.5	916.2	889.8
16°	1721.1	1818.2	1955.8	1906.8	1445.9	1147.1	986.8	890.7	864.3
17°	1665.5	1744.6	1926.6	1907.7	1427.0	1127.3	949.1	867.1	846.4
18°	1587.2	1675.8	1880.4	1903.9	1407.2	1103.7	917.1	847.3	821.9
19°	1500.5	1606.1	1831.4	1897.3	1390.3	1079.2	883.2	826.6	804.9
20°	1439.3	1536.3	1783.3	1887.0	1372.3	1063.2	865.3	803.0	783.3
21°	1336.5	1455.3	1735.2	1872.8	1353.5	1035.9	840.7	782.3	760.6
22.5°	1231.9	1341.2	1646.6	1849.3	1322.4	1001.9	813.4	756.9	724.8
23°	1191.4	1313.9	1619.3	1842.7	1312.0	993.4	804.9	745.6	717.3
24°	1104.7	1231.9	1562.7	1821.9	1289.4	965.2	788.9	722.9	703.1
25°	989.7	1162.2	1510.0	1800.3	1270.5	944.4	772.9	705.0	679.6
26°	859.6	1067.0	1461.9	1773.9	1244.2	916.2	751.2	688.1	652.2
27°	779.5	985.0	1396.8	1745.6	1225.3	895.4	733.3	662.6	637.2
28°	715.4	855.8	1338.4	1718.3	1202.7	870.0	721.0	644.7	614.5
29°	645.6	785.1	1269.6	1681.5	1178.2	840.7	701.3	626.8	594.7
30°	605.1	709.7	1210.2	1654.2	1149.0	821.0	677.7	608.9	576.8
32.5°	531.6	585.3	1049.1	1575.9	1093.3	764.4	639.0	559.9	532.5
35°	492.9	521.2	843.6	1484.5	1030.2	717.3	594.7	519.3	494.8
37.5°	463.7	480.7	696.5	1386.5	966.1	675.8	554.2	481.6	458.1
40°	434.5	447.7	576.8	1292.2	903.9	635.3	514.6	443.0	425.1
42.5°	408.1	418.5	500.5	1198.9	839.8	593.8	476.0	412.8	396.8
45°	378.9	388.3	456.2	1085.8	775.7	551.4	440.2	379.8	370.4
47.5°	354.4	361.0	413.8	985.0	712.6	510.9	403.4	353.5	346.9
50°	328.0	336.5	378.0	872.8	655.1	471.3	372.3	329.9	324.2
52.5°	302.6	306.3	347.8	760.6	594.7	432.6	339.3	306.3	302.6
55°	268.6	283.7	312.0	645.6	534.4	396.8	305.4	281.8	279.0
57.5°	230.0	249.8	279.9	542.0	477.9	357.2	278.1	259.2	246.9
60°	184.7	208.3	247.9	450.5	427.9	321.4	249.8	220.6	205.5
62.5°	162.1	169.7	218.7	377.0	377.0	287.5	221.5	189.5	182.9
65°	141.4	147.0	187.6	312.0	328.0	249.8	196.0	164.0	158.3



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	123.5	128.2	143.3	260.1	282.8	217.7	162.1	143.3	136.7
70°	105.6	109.3	122.5	212.1	241.3	185.7	136.7	122.5	117.8
72.5°	89.5	93.3	100.9	159.3	197.9	154.6	115.0	104.6	100.9
75°	74.5	76.3	83.9	118.8	159.3	123.5	92.4	85.8	83.9
77.5°	60.3	61.3	66.0	84.8	123.5	94.3	74.5	68.8	67.9
80°	46.2	47.1	50.9	61.3	90.5	67.9	55.6	52.8	50.9
82.5°	33.0	33.9	35.8	41.5	61.3	46.2	39.6	38.6	35.8
85°	20.7	20.7	22.6	25.4	34.9	26.4	24.5	23.6	22.6
87.5°	9.4	9.4	10.4	10.4	16.0	11.3	11.3	10.4	9.4
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	18.27	19.74	18.63	20.05	20.36	20.96	22.43	21.33	22.74	23.06
	3H	19.38	20.70	19.76	21.03	21.39	22.40	23.72	22.78	24.05	24.41
	4H	19.83	21.06	20.23	21.41	21.79	22.91	24.14	23.31	24.49	24.87
	6H	20.17	21.31	20.58	21.67	22.07	23.23	24.37	23.65	24.74	25.13
	8H	20.28	21.36	20.71	21.75	22.16	23.32	24.40	23.75	24.79	25.19
	12H	20.36	21.39	20.79	21.77	22.20	23.37	24.40	23.80	24.79	25.21
4H	2H	19.44	20.67	19.84	21.02	21.40	21.42	22.65	21.82	23.00	23.38
	3H	20.66	21.68	21.07	22.08	22.49	23.07	24.09	23.48	24.49	24.89
	4H	21.14	22.06	21.58	22.48	22.92	23.71	24.63	24.14	25.04	25.48
	6H	21.54	22.34	22.00	22.78	23.25	24.17	24.96	24.63	25.41	25.87
	8H	21.68	22.42	22.14	22.87	23.34	24.29	25.04	24.76	25.48	25.95
	12H	21.78	22.44	22.26	22.92	23.39	24.38	25.04	24.86	25.52	25.99
8H	4H	21.54	22.29	22.01	22.73	23.20	23.82	24.57	24.29	25.01	25.48
	6H	22.04	22.65	22.53	23.14	23.62	24.39	25.00	24.88	25.49	25.97
	8H	22.23	22.78	22.74	23.29	23.78	24.59	25.14	25.10	25.65	26.14
	12H	22.38	22.87	22.89	23.36	23.93	24.73	25.22	25.24	25.71	26.28
12H	4H	21.59	22.25	22.08	22.73	23.21	23.81	24.48	24.30	24.96	25.43
	6H	22.11	22.66	22.62	23.17	23.66	24.38	24.93	24.90	25.44	25.93
	8H	22.35	22.83	22.86	23.33	23.89	24.63	25.11	25.14	25.61	26.17