

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: P735853

Luminaire Tested: S122DRP-S1005D830-X4F0-XX-UDD-W-W

Issue Date: 1/24/2024

**Test Information**

Test Method: LM-79-2024  
Report Number: P735853  
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-S1005D830-X4F0-XX-UDD-W-W  
Description: DEFINE 2 DIRECT RECESSED WITH WALL WASH OPTIC  
Light Source: 3000K CCT, 80 CRI LEDS  
Ballast/Driver: -

**Summary**

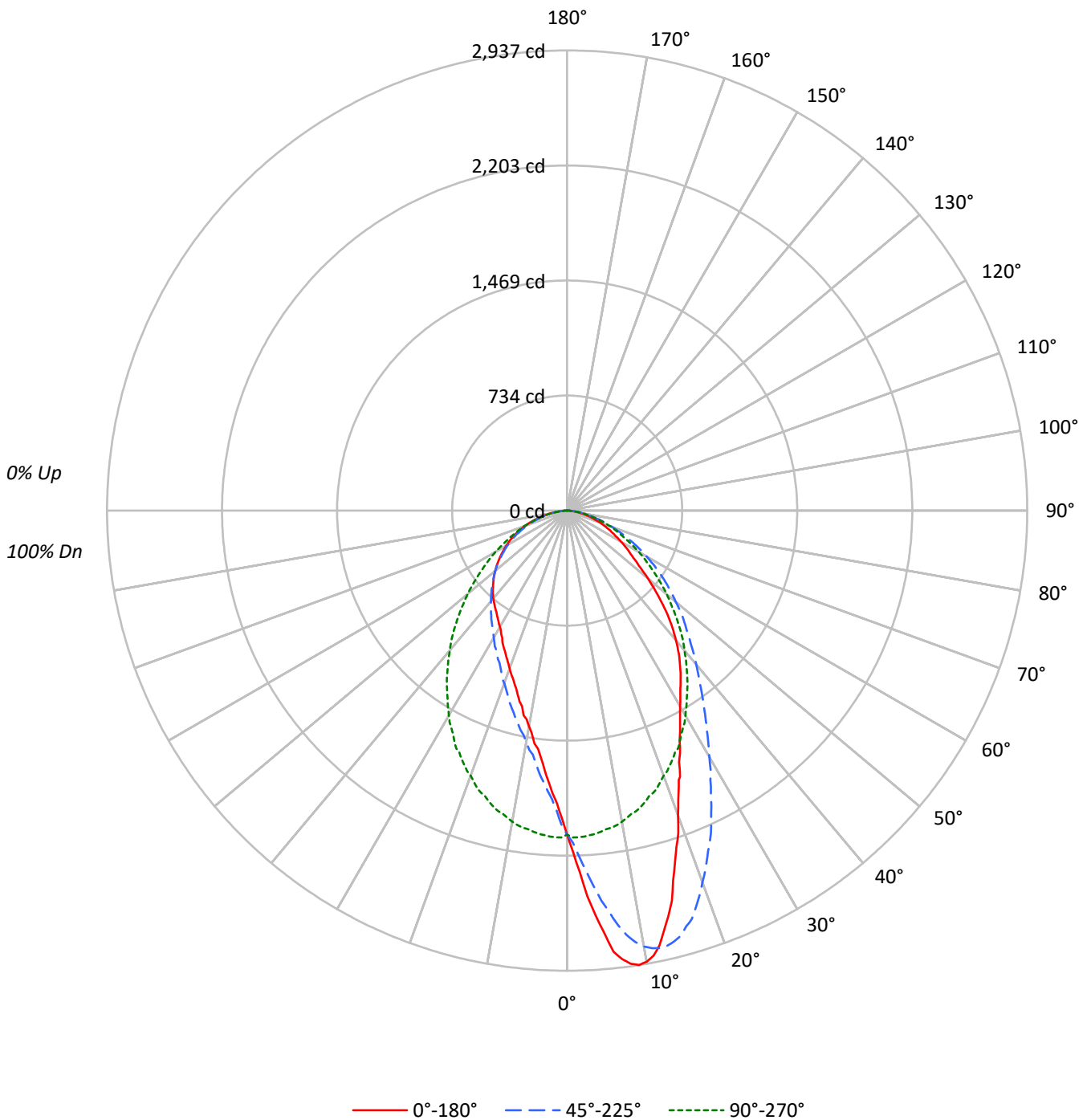
Lumens per Lamp: N/A  
Luminaire Lumens: 4208.2 lumens  
Efficiency: N/A  
Efficacy: 100.7 lumens/watt  
Spacing Criteria (0/90/45): 0.9 / 1.11 / 1.12  
Luminous Opening: Rectangular (W 4' x L: 0.14' x H: 0')  
CIE Type: Direct

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

TEST NUMBER: P735853

CATALOG NUMBER: S122DRP-S1005D830-X4F0-XX-UDD-W-W

### Luminous Intensity Polar Plot





TEST NUMBER: P735853

CATALOG NUMBER: S122DRP-S1005D830-X4F0-XX-UDD-W-W

**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	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°	39755	39755	39755	39755	39755
5°	52138	48189	39961	33517	31979
10°	57070	55155	39369	29298	27300
15°	51340	55865	38300	26448	24214
20°	42364	51669	36839	23987	21952
25°	36207	46094	35543	22188	20349
30°	32023	40257	33505	20792	19056
35°	29620	35657	31419	19814	18511
40°	27106	32172	29247	18974	18405
45°	23880	29366	27047	18392	18161
50°	20107	27077	24781	17894	17939
55°	16910	24912	22389	17292	17624
60°	15246	22516	20328	16776	17268
65°	13835	19784	18102	15969	16937
70°	12465	17096	16298	14780	16056
75°	10872	14459	13932	13405	14675
80°	9121	11324	11324	11645	12276
85°	6903	8160	8469	9086	8777

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 67.5°  
 Vertical Angle: 45°  
 Luminance: 43123 cd/sqm



TEST NUMBER: P735853

CATALOG NUMBER: S122DRP-S1005D830-X4F0-XX-UDD-W-W

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	203.5	4.8
10°-20°	558.6	13.3
20°-30°	732.6	17.4
30°-40°	774.3	18.4
40°-50°	718.9	17.1
50°-60°	575.4	13.7
60°-70°	393.5	9.4
70°-80°	203.1	4.8
80°-90°	48.2	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°	1494.8	35.5
0°-40°	2269.1	53.9
0°-60°	3563.4	84.7
0°-90°	4208.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4208.2	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	2068	2068	2068	2068	2068	
5°	2702	2498	2071	1737	1657	266
15°	2580	2807	1925	1329	1217	708
25°	1707	2173	1676	1046	960	787
35°	1262	1520	1339	844	789	788
45°	878	1080	995	677	668	675
55°	505	743	668	516	526	462
65°	304	435	398	351	372	302
75°	146	195	188	180	198	156
85°	31	37	38	41	40	38
90°	0	0	0	0	0	



TEST NUMBER: P735853

CATALOG NUMBER: S122DRP-S1005D830-X4F0-XX-UDD-W-W

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	2068.3	2068.3	2068.3	2068.3	2068.3	2068.3	2068.3	2068.3	2068.3
1°	2182.0	2170.6	2120.9	2123.7	2086.7	2045.5	2007.1	1983.0	1963.1
2°	2309.9	2287.2	2209.0	2170.6	2086.7	1998.6	1919.0	1897.7	1870.7
3°	2464.9	2410.8	2302.8	2211.8	2083.9	1956.0	1846.5	1808.1	1803.9
4°	2589.9	2541.6	2398.0	2254.5	2076.8	1914.7	1791.1	1749.8	1729.9
5°	2702.2	2671.0	2497.5	2308.5	2071.1	1874.9	1737.1	1680.2	1657.4
6°	2831.6	2767.6	2577.1	2362.5	2061.2	1836.6	1688.7	1620.5	1589.2
7°	2884.2	2844.4	2666.7	2398.0	2048.4	1792.5	1627.6	1553.7	1530.9
8°	2921.1	2905.5	2737.8	2456.3	2042.7	1751.3	1573.6	1528.1	1501.1
9°	2936.8	2924.0	2788.9	2480.5	2032.7	1729.9	1546.6	1471.2	1441.4
10°	2924.0	2929.7	2825.9	2517.4	2017.1	1685.9	1501.1	1435.7	1398.7
11°	2894.1	2908.4	2845.8	2560.1	1997.2	1650.3	1459.9	1393.1	1357.5
12°	2837.3	2868.6	2854.3	2589.9	1978.7	1619.1	1431.4	1367.5	1336.2
13°	2749.1	2818.8	2848.7	2602.7	1967.3	1583.5	1395.9	1322.0	1282.2
14°	2669.5	2742.0	2833.0	2631.2	1947.4	1543.7	1363.2	1289.3	1255.2
15°	2580.0	2663.9	2807.4	2639.7	1924.7	1511.0	1329.1	1248.1	1216.8
16°	2454.9	2567.2	2760.5	2649.6	1897.7	1474.1	1297.8	1221.1	1179.8
17°	2351.1	2472.0	2725.0	2655.3	1883.5	1445.6	1270.8	1179.8	1152.8
18°	2255.9	2392.4	2661.0	2651.1	1860.7	1413.0	1231.0	1150.0	1124.4
19°	2180.6	2291.4	2597.0	2641.1	1829.4	1381.7	1201.2	1128.7	1098.8
20°	2071.1	2199.0	2526.0	2636.9	1801.0	1353.3	1172.7	1098.8	1073.2
21°	1980.1	2110.9	2460.6	2622.6	1781.1	1326.2	1151.4	1070.4	1047.6
22.5°	1860.7	1975.9	2351.1	2595.6	1737.1	1280.8	1104.5	1043.4	1012.1
23°	1846.5	1944.6	2322.7	2587.1	1724.3	1270.8	1088.9	1027.7	1002.1
24°	1757.0	1860.7	2255.9	2560.1	1691.6	1239.5	1063.3	1009.3	979.4
25°	1707.2	1792.5	2173.4	2534.5	1675.9	1211.1	1046.2	985.1	959.5
26°	1637.5	1735.6	2099.5	2497.5	1641.8	1185.5	1019.2	963.8	939.6
27°	1586.4	1668.8	2022.8	2470.5	1602.0	1158.5	997.9	942.4	912.6
28°	1536.6	1616.2	1948.9	2426.5	1573.6	1128.7	982.2	924.0	895.5
29°	1485.4	1555.1	1889.2	2392.4	1546.6	1103.1	958.1	899.8	872.8
30°	1442.8	1506.8	1813.8	2346.9	1509.6	1073.2	936.8	882.7	858.6
32.5°	1344.7	1398.7	1660.3	2238.8	1421.5	1013.5	885.6	835.8	821.6
35°	1262.3	1297.8	1519.6	2118.0	1339.0	949.6	844.4	796.0	788.9
37.5°	1175.6	1209.7	1391.6	1991.5	1252.3	891.3	797.5	766.2	760.5
40°	1080.3	1125.8	1282.2	1866.4	1165.6	834.4	756.2	732.1	733.5
42.5°	985.1	1037.7	1175.6	1720.0	1084.6	780.4	716.4	699.4	702.2
45°	878.5	945.3	1080.3	1586.4	995.0	729.2	676.6	668.1	668.1
47.5°	767.6	852.9	997.9	1448.5	909.7	678.0	638.2	632.6	635.4
50°	672.4	749.1	905.5	1314.9	828.7	631.1	598.4	597.0	599.9
52.5°	578.5	655.3	824.5	1189.8	746.3	588.5	560.1	560.1	562.9
55°	504.6	564.3	743.4	1059.0	668.1	538.7	516.0	520.3	525.9
57.5°	453.5	493.3	663.8	933.9	595.6	490.4	476.2	479.0	486.1
60°	396.6	427.9	585.7	818.8	528.8	443.5	436.4	442.1	449.2
62.5°	345.4	372.4	511.7	715.0	456.3	398.0	395.2	403.7	410.8
65°	304.2	322.7	435.0	609.8	398.0	352.5	351.1	363.9	372.4



TEST NUMBER: P735853

CATALOG NUMBER: S122DRP-S1005D830-X4F0-XX-UDD-W-W

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	261.6	275.8	368.2	510.3	339.7	307.0	307.0	321.3	328.4
70°	221.8	233.1	304.2	420.8	290.0	261.6	263.0	280.0	285.7
72.5°	180.5	190.5	247.3	338.3	234.5	218.9	223.2	237.4	243.1
75°	146.4	153.5	194.7	267.2	187.6	174.8	180.5	193.3	197.6
77.5°	112.3	118.0	143.6	196.2	143.6	136.5	142.1	153.5	153.5
80°	82.4	83.9	102.3	137.9	102.3	98.1	105.2	110.9	110.9
82.5°	54.0	56.9	66.8	88.1	68.2	66.8	69.7	73.9	73.9
85°	31.3	32.7	37.0	48.3	38.4	38.4	41.2	41.2	39.8
87.5°	12.8	14.2	15.6	18.5	17.1	18.5	18.5	15.6	17.1
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P735853  
 CATALOG NUMBER: S122DRP-S1005D830-X4F0-XX-UDD-W-W

**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	22.01	23.54	22.38	23.85	24.16	21.59	23.11	21.96	23.43	23.74
	3H	23.22	24.58	23.59	24.91	25.27	23.10	24.47	23.48	24.80	25.16
	4H	23.61	24.90	24.01	25.25	25.62	23.63	24.91	24.03	25.26	25.64
	6H	23.87	25.05	24.28	25.42	25.81	23.98	25.17	24.39	25.53	25.93
	8H	23.93	25.06	24.35	25.45	25.85	24.08	25.21	24.50	25.60	26.00
	12H	23.96	25.04	24.39	25.42	25.85	24.13	25.21	24.56	25.59	26.02
4H	2H	23.07	24.35	23.47	24.70	25.08	22.66	23.94	23.06	24.29	24.67
	3H	24.43	25.50	24.84	25.90	26.30	24.29	25.35	24.70	25.75	26.15
	4H	24.89	25.85	25.33	26.27	26.71	24.87	25.83	25.30	26.24	26.68
	6H	25.21	26.04	25.66	26.48	26.94	25.29	26.12	25.74	26.56	27.02
	8H	25.29	26.06	25.75	26.51	26.98	25.40	26.18	25.87	26.63	27.10
	12H	25.33	26.03	25.82	26.51	26.98	25.48	26.18	25.96	26.65	27.13
8H	4H	25.25	26.03	25.71	26.47	26.94	25.21	25.99	25.67	26.43	26.90
	6H	25.65	26.30	26.15	26.79	27.26	25.73	26.37	26.22	26.86	27.34
	8H	25.77	26.35	26.29	26.86	27.35	25.89	26.47	26.41	26.98	27.47
	12H	25.86	26.37	26.37	26.86	27.43	26.02	26.53	26.53	27.02	27.58
12H	4H	25.27	25.97	25.76	26.45	26.92	25.23	25.92	25.71	26.40	26.87
	6H	25.70	26.28	26.21	26.79	27.27	25.77	26.35	26.28	26.86	27.34
	8H	25.87	26.38	26.38	26.87	27.43	25.99	26.50	26.50	26.99	27.55