

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: P735898

Luminaire Tested: S122RDRP-S1005D830-X4F0-XX-UDD-W-W

Issue Date: 1/24/2024

Test Information

Test Method: LM-79-2024
Report Number: P735898
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-S1005D830-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

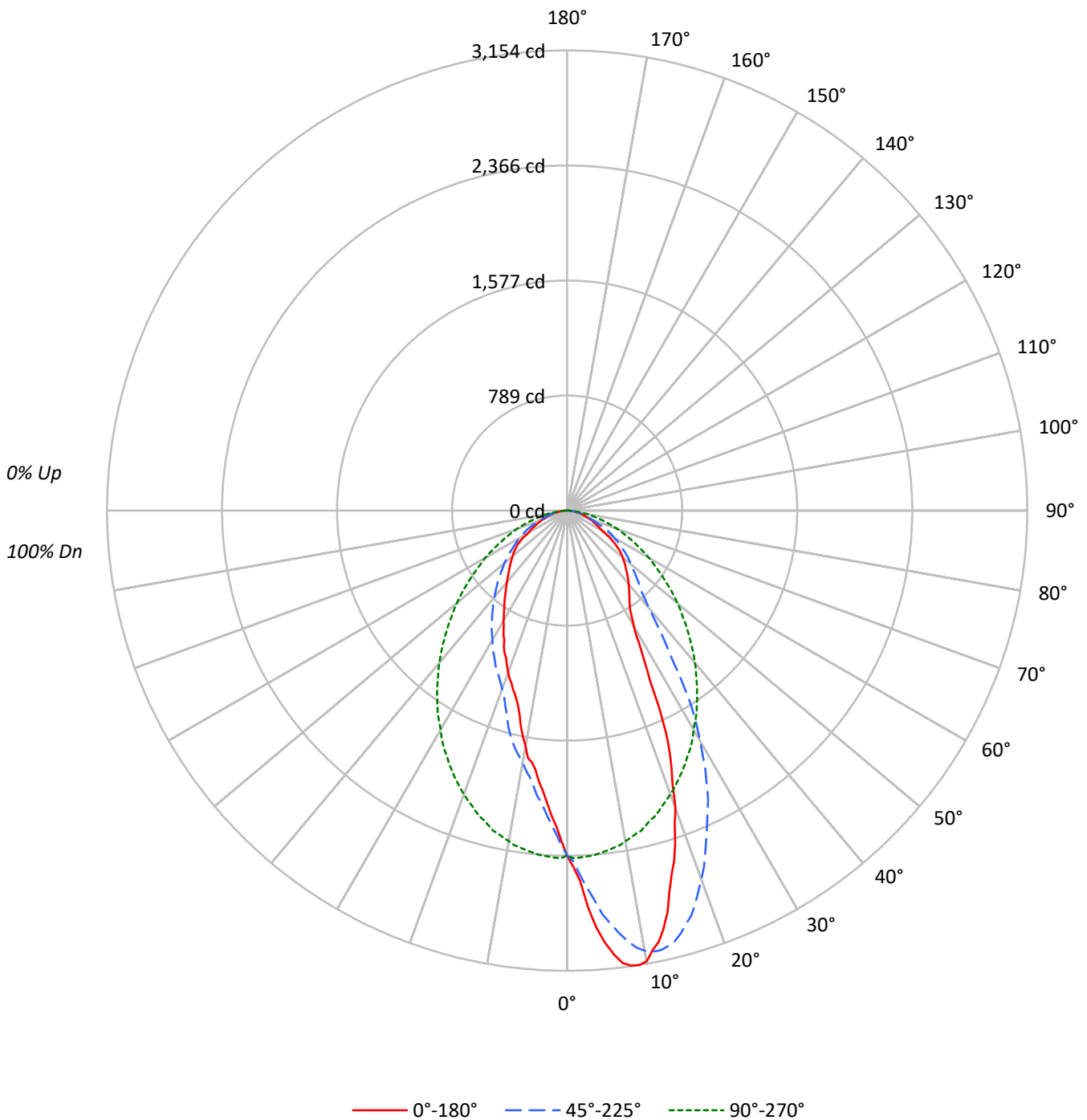
Lumens per Lamp: N/A
Luminaire Lumens: 4050.5 lumens
Efficiency: N/A
Efficacy: 96.9 lumens/watt
Spacing Criteria (0/90/45): 0.82 / 1.11 / 1
Luminous Opening: Rectangular (W 4' x L: 0.14' x H: 0')
CIE Type: Direct

Input Watts (W): 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: P735898

CATALOG NUMBER: S122RDRP-S1005D830-X4F0-XX-UDD-W-W

Luminous Intensity Polar Plot





TEST NUMBER: P735898

CATALOG NUMBER: S122RDRP-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	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				
2	102	95	89	84	99	93	87	83	89	85	81	86	82	79	83	80	77					75				
3	94	85	78	72	92	83	77	71	80	75	70	78	73	69	75	71	68					66				
4	87	77	69	63	85	75	68	62	73	67	62	71	65	61	69	64	60					58				
5	81	69	61	55	79	68	61	55	66	60	55	64	59	54	63	58	54					52				
6	75	63	55	50	74	63	55	49	61	54	49	59	53	49	58	52	48					46				
7	71	58	50	45	69	57	50	45	56	49	44	55	49	44	53	48	44					42				
8	66	54	46	41	65	53	46	41	52	45	40	51	45	40	50	44	40					38				
9	62	50	42	37	61	49	42	37	48	42	37	47	41	37	46	41	37					35				
10	59	46	39	34	57	46	39	34	45	39	34	44	38	34	43	38	34					32				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	45437	45437	45437	45437	45437
5°	57323	53620	45611	38755	37109
10°	61231	59789	44918	34293	32044
15°	53858	59770	43731	30748	26703
20°	44399	55011	42335	26692	24163
25°	31656	48296	40639	24720	21736
30°	20255	40510	38459	22683	19307
35°	17444	29852	36457	21048	17512
40°	16443	21827	34205	19474	16086
45°	15532	18702	31801	18044	15184
50°	14793	17045	29541	16791	14623
55°	13575	15767	27010	15435	14102
60°	10710	14374	24811	14481	11913
65°	9697	12867	22500	13449	10861
70°	8947	10386	20451	11583	9987
75°	8340	9395	17839	10345	9395
80°	7715	8501	15109	9287	8501
85°	6903	7520	11600	8160	7520

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 44515 cd/sqm



TEST NUMBER: P735898

CATALOG NUMBER: S122RDRP-S1005D830-X4F0-XX-UDD-W-W

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	229.3	5.7
10°-20°	616.0	15.2
20°-30°	772.7	19.1
30°-40°	736.3	18.2
40°-50°	649.5	16.0
50°-60°	510.9	12.6
60°-70°	326.0	8.0
70°-80°	165.7	4.1
80°-90°	44.0	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°	1618.0	39.9
0°-40°	2354.3	58.1
0°-60°	3514.8	86.8
0°-90°	4050.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4050.5	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2364	2364	2364	2364	2364	
5°	2971	2779	2364	2009	1923	289
15°	2706	3004	2198	1545	1342	750
25°	1493	2277	1916	1166	1025	673
35°	743	1272	1554	897	746	473
45°	571	688	1170	664	559	443
55°	405	470	806	461	421	356
65°	213	283	495	296	239	213
75°	112	126	240	139	126	119
85°	31	34	53	37	34	35
90°	0	0	0	0	0	



TEST NUMBER: P735898

CATALOG NUMBER: S122RDRP-S1005D830-X4F0-XX-UDD-W-W

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	2363.9	2363.9	2363.9	2363.9	2363.9	2363.9	2363.9	2363.9	2363.9
1°	2443.5	2454.9	2402.3	2408.0	2382.4	2336.9	2292.9	2297.1	2265.8
2°	2541.6	2571.5	2499.0	2454.9	2381.0	2301.4	2213.3	2201.9	2163.5
3°	2719.3	2705.1	2585.7	2496.1	2375.3	2255.9	2145.0	2119.4	2086.7
4°	2862.9	2820.2	2673.8	2548.7	2372.5	2203.3	2078.2	2034.1	2001.5
5°	2970.9	2916.9	2779.0	2588.5	2363.9	2173.5	2008.6	1958.8	1923.3
6°	3057.6	3016.4	2847.2	2625.5	2352.6	2129.4	1967.3	1900.5	1863.6
7°	3124.4	3090.3	2916.9	2675.2	2342.6	2085.3	1901.9	1832.3	1788.2
8°	3150.0	3134.4	2980.9	2710.8	2331.2	2054.0	1843.7	1781.1	1741.3
9°	3154.3	3155.7	3032.0	2744.9	2321.3	1997.2	1802.4	1738.5	1717.2
10°	3137.2	3150.0	3063.3	2783.3	2301.4	1968.8	1757.0	1695.8	1641.8
11°	3070.4	3127.3	3078.9	2808.9	2284.3	1923.3	1717.2	1637.6	1583.5
12°	3020.7	3074.7	3080.4	2841.5	2264.4	1901.9	1683.0	1576.4	1519.6
13°	2938.2	2995.1	3066.1	2850.1	2253.1	1849.4	1640.4	1513.9	1444.2
14°	2840.1	2931.1	3043.4	2868.6	2224.6	1803.9	1597.7	1425.7	1384.5
15°	2706.5	2835.9	3003.6	2875.7	2197.6	1772.6	1545.2	1381.7	1341.9
16°	2595.6	2742.0	2949.6	2875.7	2180.6	1729.9	1488.3	1343.3	1303.5
17°	2511.8	2631.2	2905.5	2877.1	2152.1	1700.1	1431.4	1307.8	1276.5
18°	2393.8	2527.4	2835.9	2871.4	2122.3	1664.6	1383.1	1277.9	1239.5
19°	2263.0	2422.2	2761.9	2861.4	2096.7	1627.6	1331.9	1246.6	1213.9
20°	2170.6	2317.0	2689.4	2845.8	2069.7	1603.4	1304.9	1211.1	1181.3
21°	2015.7	2194.8	2617.0	2824.5	2041.3	1562.2	1268.0	1179.8	1147.1
22.5°	1857.9	2022.8	2483.3	2789.0	1994.3	1511.0	1226.7	1141.5	1093.1
23°	1796.8	1981.6	2442.1	2779.0	1978.7	1498.2	1213.9	1124.4	1081.8
24°	1666.0	1857.9	2356.8	2747.7	1944.6	1455.6	1189.8	1090.3	1060.4
25°	1492.6	1752.7	2277.2	2715.0	1916.2	1424.3	1165.6	1063.3	1024.9
26°	1296.4	1609.1	2204.7	2675.2	1876.4	1381.7	1132.9	1037.7	983.7
27°	1175.6	1485.5	2106.6	2632.6	1847.9	1350.4	1105.9	999.3	960.9
28°	1078.9	1290.7	2018.5	2591.4	1813.8	1312.0	1087.4	972.3	926.8
29°	973.7	1184.1	1914.7	2535.9	1776.9	1268.0	1057.6	945.3	897.0
30°	912.6	1070.4	1825.2	2494.7	1732.8	1238.1	1022.0	918.3	869.9
32.5°	801.7	882.7	1582.1	2376.7	1648.9	1152.8	963.8	844.4	803.1
35°	743.4	786.1	1272.2	2238.8	1553.7	1081.8	897.0	783.2	746.3
37.5°	699.4	725.0	1050.5	2091.0	1457.0	1019.2	835.8	726.4	690.8
40°	655.3	675.2	869.9	1948.9	1363.2	958.1	776.1	668.1	641.1
42.5°	615.5	631.1	754.8	1808.1	1266.5	895.5	717.8	622.6	598.4
45°	571.4	585.7	688.0	1637.6	1169.9	831.6	663.8	572.9	558.6
47.5°	534.5	544.4	624.0	1485.5	1074.6	770.4	608.4	533.1	523.1
50°	494.7	507.5	570.0	1316.3	987.9	710.7	561.5	497.5	489.0
52.5°	456.3	462.0	524.5	1147.1	897.0	652.5	511.7	462.0	456.3
55°	405.1	427.9	470.5	973.7	806.0	598.4	460.6	425.0	420.8
57.5°	346.8	376.7	422.2	817.4	720.7	538.7	419.3	390.9	372.4
60°	278.6	314.1	373.9	679.5	645.4	484.7	376.7	332.6	309.9
62.5°	244.5	255.9	329.8	568.6	568.6	433.6	334.0	285.7	275.8
65°	213.2	221.8	282.9	470.5	494.7	376.7	295.7	247.3	238.8



TEST NUMBER: P735898

CATALOG NUMBER: S122RDRP-S1005D830-X4F0-XX-UDD-W-W

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	186.2	193.3	216.1	392.3	426.4	328.4	244.5	216.1	206.1
70°	159.2	164.9	184.8	319.8	363.9	280.0	206.1	184.8	177.7
72.5°	135.0	140.7	152.1	240.2	298.5	233.1	173.4	157.8	152.1
75°	112.3	115.1	126.5	179.1	240.2	186.2	139.3	129.4	126.5
77.5°	91.0	92.4	99.5	127.9	186.2	142.1	112.3	103.8	102.3
80°	69.7	71.1	76.8	92.4	136.5	102.3	83.9	79.6	76.8
82.5°	49.8	51.2	54.0	62.5	92.4	69.7	59.7	58.3	54.0
85°	31.3	31.3	34.1	38.4	52.6	39.8	37.0	35.5	34.1
87.5°	14.2	14.2	15.6	15.6	24.2	17.1	17.1	15.6	14.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P735898

CATALOG NUMBER: S122RDRP-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	19.70	21.16	20.06	21.48	21.79	22.39	23.86	22.76	24.17	24.49
	3H	20.81	22.12	21.19	22.45	22.82	23.83	25.14	24.21	25.47	25.84
	4H	21.25	22.48	21.65	22.83	23.21	24.33	25.56	24.73	25.91	26.29
	6H	21.60	22.73	22.01	23.10	23.49	24.66	25.79	25.07	26.16	26.55
	8H	21.71	22.79	22.14	23.18	23.58	24.75	25.83	25.18	26.22	26.62
	12H	21.79	22.82	22.22	23.20	23.63	24.80	25.83	25.23	26.21	26.64
4H	2H	20.86	22.10	21.26	22.44	22.82	22.84	24.07	23.24	24.42	24.80
	3H	22.09	23.11	22.50	23.51	23.91	24.50	25.52	24.91	25.92	26.32
	4H	22.57	23.49	23.00	23.90	24.34	25.14	26.06	25.57	26.47	26.91
	6H	22.97	23.77	23.43	24.21	24.67	25.59	26.39	26.05	26.83	27.29
	8H	23.11	23.85	23.57	24.30	24.76	25.72	26.46	26.19	26.91	27.38
	12H	23.21	23.87	23.69	24.35	24.82	25.80	26.46	26.28	26.94	27.42
8H	4H	22.97	23.72	23.44	24.16	24.63	25.25	25.99	25.72	26.44	26.91
	6H	23.46	24.08	23.96	24.57	25.05	25.81	26.43	26.31	26.92	27.40
	8H	23.65	24.20	24.17	24.71	25.20	26.01	26.56	26.53	27.07	27.56
	12H	23.81	24.30	24.32	24.79	25.36	26.16	26.65	26.67	27.14	27.70
12H	4H	23.02	23.68	23.50	24.16	24.63	25.24	25.90	25.72	26.38	26.85
	6H	23.53	24.08	24.05	24.59	25.08	25.81	26.36	26.33	26.87	27.36
	8H	23.78	24.26	24.29	24.75	25.32	26.06	26.54	26.57	27.03	27.60