

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: P735928

Luminaire Tested: S122RDR-S675D850-X4F0-XX-UDD-W-W

Issue Date: 1/24/2024

Test Information

Test Method: LM-79-2019
Report Number: P735928
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: S122RDR-S675D850-X4F0-XX-UDD-W-W
Description: DEFINE 2 REGRESSED DIRECT RECESSED WITH WALL WASH OPTIC
Light Source: 5000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3160.1 lumens
Efficiency: N/A
Efficacy: 120.2 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

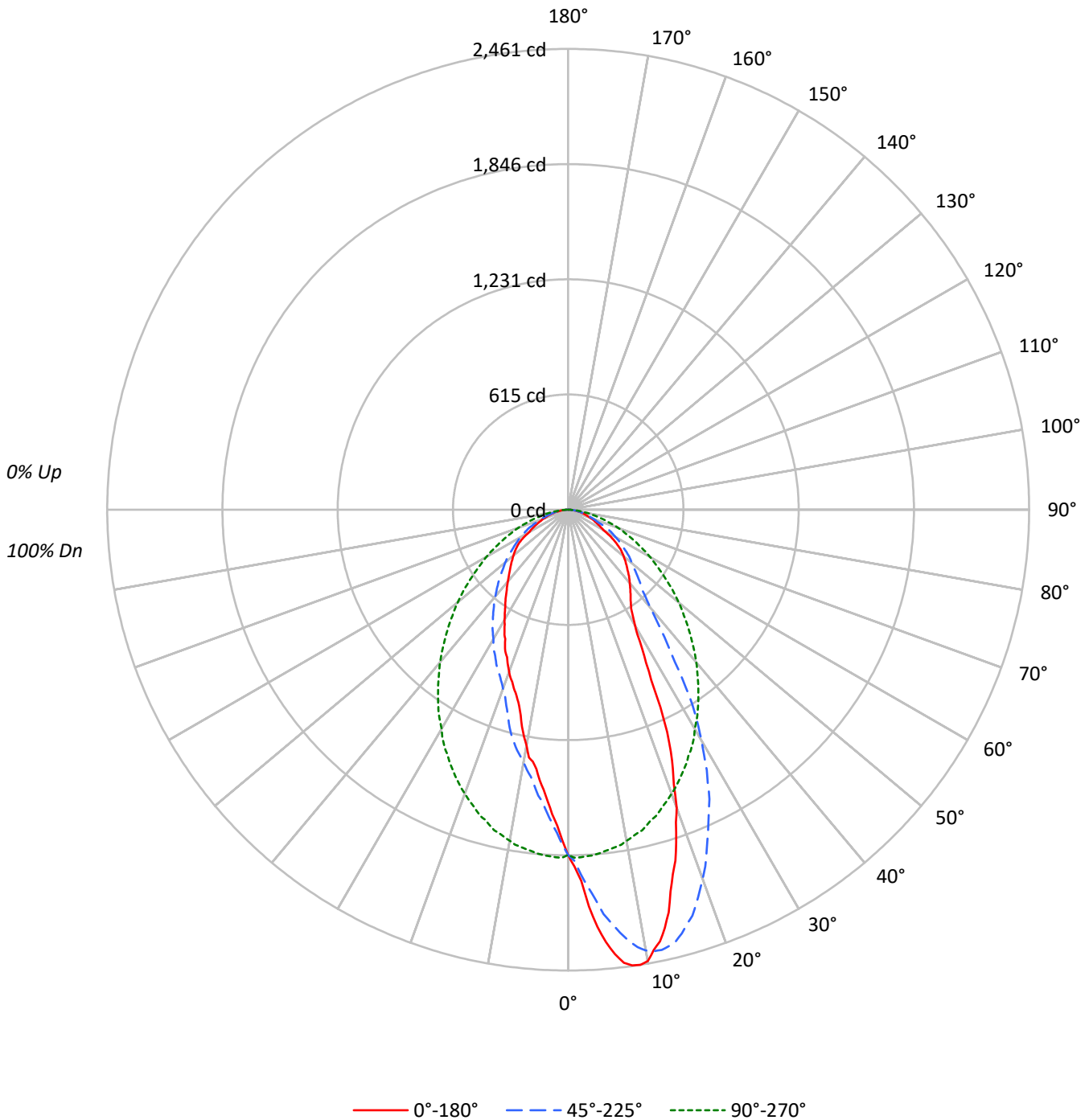
Input Watts (W): 26.3
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P735928

CATALOG NUMBER: S122RDR-S675D850-X4F0-XX-UDD-W-W

Luminous Intensity Polar Plot



TEST NUMBER: P735928

CATALOG NUMBER: S122RDR-S675D850-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					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°	35450	35450	35450	35450	35450
5°	44721	41833	35585	30235	28952
10°	47772	46646	35044	26753	25000
15°	42017	46630	34117	23989	20833
20°	34638	42918	33028	20825	18851
25°	24697	37679	31704	19287	16958
30°	15803	31605	30005	17698	15064
35°	13610	23291	28442	16421	13661
40°	12827	17030	26685	15193	12551
45°	12118	14592	24810	14078	11846
50°	11540	13298	23049	13101	11408
55°	10593	12302	21072	12041	11002
60°	8357	11214	19356	11298	9295
65°	7568	10038	17551	10493	8473
70°	6980	8104	15955	9037	7789
75°	6506	7330	13917	8073	7330
80°	6011	6630	11789	7239	6630
85°	5381	5866	9042	6352	5866

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 34729 cd/sqm



TEST NUMBER: P735928

CATALOG NUMBER: S122RDR-S675D850-X4F0-XX-UDD-W-W

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	178.9	5.7
10°-20°	480.6	15.2
20°-30°	602.9	19.1
30°-40°	574.4	18.2
40°-50°	506.8	16.0
50°-60°	398.6	12.6
60°-70°	254.4	8.0
70°-80°	129.3	4.1
80°-90°	34.3	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°	1262.3	39.9
0°-40°	1836.8	58.1
0°-60°	2742.1	86.8
0°-90°	3160.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3160.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1844	1844	1844	1844	1844	
5°	2318	2168	1844	1567	1500	225
15°	2112	2343	1714	1206	1047	585
25°	1164	1777	1495	909	800	525
35°	580	993	1212	700	582	369
45°	446	537	913	518	436	346
55°	316	367	629	359	328	278
65°	166	221	386	231	186	166
75°	88	99	187	109	99	93
85°	24	27	41	29	27	28
90°	0	0	0	0	0	



TEST NUMBER: P735928

CATALOG NUMBER: S122RDR-S675D850-X4F0-XX-UDD-W-W

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	1844.3	1844.3	1844.3	1844.3	1844.3	1844.3	1844.3	1844.3	1844.3
1°	1906.4	1915.2	1874.2	1878.6	1858.7	1823.2	1788.8	1792.1	1767.7
2°	1982.9	2006.2	1949.6	1915.2	1857.6	1795.5	1726.7	1717.8	1687.9
3°	2121.5	2110.4	2017.3	1947.4	1853.1	1760.0	1673.5	1653.5	1628.0
4°	2233.5	2200.3	2086.0	1988.4	1850.9	1719.0	1621.4	1587.0	1561.5
5°	2317.8	2275.7	2168.1	2019.5	1844.3	1695.7	1567.0	1528.2	1500.5
6°	2385.5	2353.3	2221.3	2048.3	1835.4	1661.3	1534.9	1482.7	1453.9
7°	2437.6	2411.0	2275.7	2087.1	1827.6	1626.9	1483.8	1429.5	1395.1
8°	2457.5	2445.3	2325.6	2114.9	1818.8	1602.5	1438.4	1389.6	1358.5
9°	2460.9	2462.0	2365.5	2141.5	1811.0	1558.1	1406.2	1356.3	1339.7
10°	2447.6	2457.5	2389.9	2171.4	1795.5	1536.0	1370.7	1323.0	1280.9
11°	2395.4	2439.8	2402.1	2191.4	1782.2	1500.5	1339.7	1277.6	1235.4
12°	2356.6	2398.8	2403.2	2216.9	1766.6	1483.8	1313.1	1229.9	1185.5
13°	2292.3	2336.7	2392.1	2223.5	1757.8	1442.8	1279.8	1181.1	1126.7
14°	2215.8	2286.8	2374.4	2238.0	1735.6	1407.3	1246.5	1112.3	1080.2
15°	2111.5	2212.5	2343.3	2243.5	1714.5	1382.9	1205.5	1077.9	1046.9
16°	2025.0	2139.3	2301.2	2243.5	1701.2	1349.7	1161.1	1048.0	1017.0
17°	1959.6	2052.8	2266.8	2244.6	1679.0	1326.4	1116.8	1020.3	995.9
18°	1867.6	1971.8	2212.5	2240.2	1655.7	1298.6	1079.1	997.0	967.0
19°	1765.5	1889.7	2154.8	2232.4	1635.8	1269.8	1039.1	972.6	947.1
20°	1693.4	1807.7	2098.2	2220.2	1614.7	1251.0	1018.1	944.9	921.6
21°	1572.6	1712.3	2041.7	2203.6	1592.5	1218.8	989.2	920.5	895.0
22.5°	1449.5	1578.1	1937.4	2175.9	1555.9	1178.9	957.1	890.5	852.8
23°	1401.8	1545.9	1905.3	2168.1	1543.7	1168.9	947.1	877.2	843.9
24°	1299.7	1449.5	1838.7	2143.7	1517.1	1135.6	928.2	850.6	827.3
25°	1164.5	1367.4	1776.6	2118.2	1494.9	1111.2	909.4	829.5	799.6
26°	1011.4	1255.4	1720.1	2087.1	1463.9	1077.9	883.9	809.6	767.4
27°	917.1	1158.9	1643.5	2053.9	1441.7	1053.6	862.8	779.6	749.7
28°	841.7	1007.0	1574.8	2021.7	1415.1	1023.6	848.4	758.6	723.1
29°	759.7	923.8	1493.8	1978.5	1386.3	989.2	825.1	737.5	699.8
30°	712.0	835.1	1424.0	1946.3	1351.9	965.9	797.4	716.4	678.7
32.5°	625.5	688.7	1234.3	1854.2	1286.4	899.4	751.9	658.7	626.6
35°	580.0	613.3	992.6	1746.7	1212.1	843.9	699.8	611.1	582.2
37.5°	545.6	565.6	819.6	1631.3	1136.7	795.2	652.1	566.7	539.0
40°	511.2	526.8	678.7	1520.4	1063.5	747.5	605.5	521.2	500.2
42.5°	480.2	492.4	588.9	1410.6	988.1	698.7	560.0	485.7	466.9
45°	445.8	456.9	536.8	1277.6	912.7	648.8	517.9	446.9	435.8
47.5°	417.0	424.7	486.9	1158.9	838.4	601.1	474.7	415.9	408.1
50°	385.9	395.9	444.7	1026.9	770.8	554.5	438.1	388.2	381.5
52.5°	356.0	360.4	409.2	895.0	699.8	509.0	399.2	360.4	356.0
55°	316.1	333.8	367.1	759.7	628.8	466.9	359.3	331.6	328.3
57.5°	270.6	293.9	329.4	637.7	562.3	420.3	327.2	305.0	290.6
60°	217.4	245.1	291.7	530.1	503.5	378.2	293.9	259.5	241.8
62.5°	190.7	199.6	257.3	443.6	443.6	338.2	260.6	222.9	215.1
65°	166.4	173.0	220.7	367.1	385.9	293.9	230.7	193.0	186.3



TEST NUMBER: P735928

CATALOG NUMBER: S122RDR-S675D850-X4F0-XX-UDD-W-W

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	145.3	150.8	168.6	306.1	332.7	256.2	190.7	168.6	160.8
70°	124.2	128.6	144.2	249.5	283.9	218.5	160.8	144.2	138.6
72.5°	105.4	109.8	118.7	187.4	232.9	181.9	135.3	123.1	118.7
75°	87.6	89.8	98.7	139.7	187.4	145.3	108.7	100.9	98.7
77.5°	71.0	72.1	77.6	99.8	145.3	110.9	87.6	81.0	79.8
80°	54.3	55.5	59.9	72.1	106.5	79.8	65.4	62.1	59.9
82.5°	38.8	39.9	42.1	48.8	72.1	54.3	46.6	45.5	42.1
85°	24.4	24.4	26.6	29.9	41.0	31.1	28.8	27.7	26.6
87.5°	11.1	11.1	12.2	12.2	18.9	13.3	13.3	12.2	11.1
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)