

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: P735938

Luminaire Tested: S122RDR-S865D927-X4F0-XX-UDD-W-W

Issue Date: 1/24/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P735938  
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-S865D927-X4F0-XX-UDD-W-W  
Description: DEFINE 2 REGRESSED DIRECT RECESSED WITH WALL WASH OPTIC  
Light Source: 2700K CCT, 90 CRI LEDS  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2900.7 lumens  
Efficiency: N/A  
Efficacy: 82.9 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

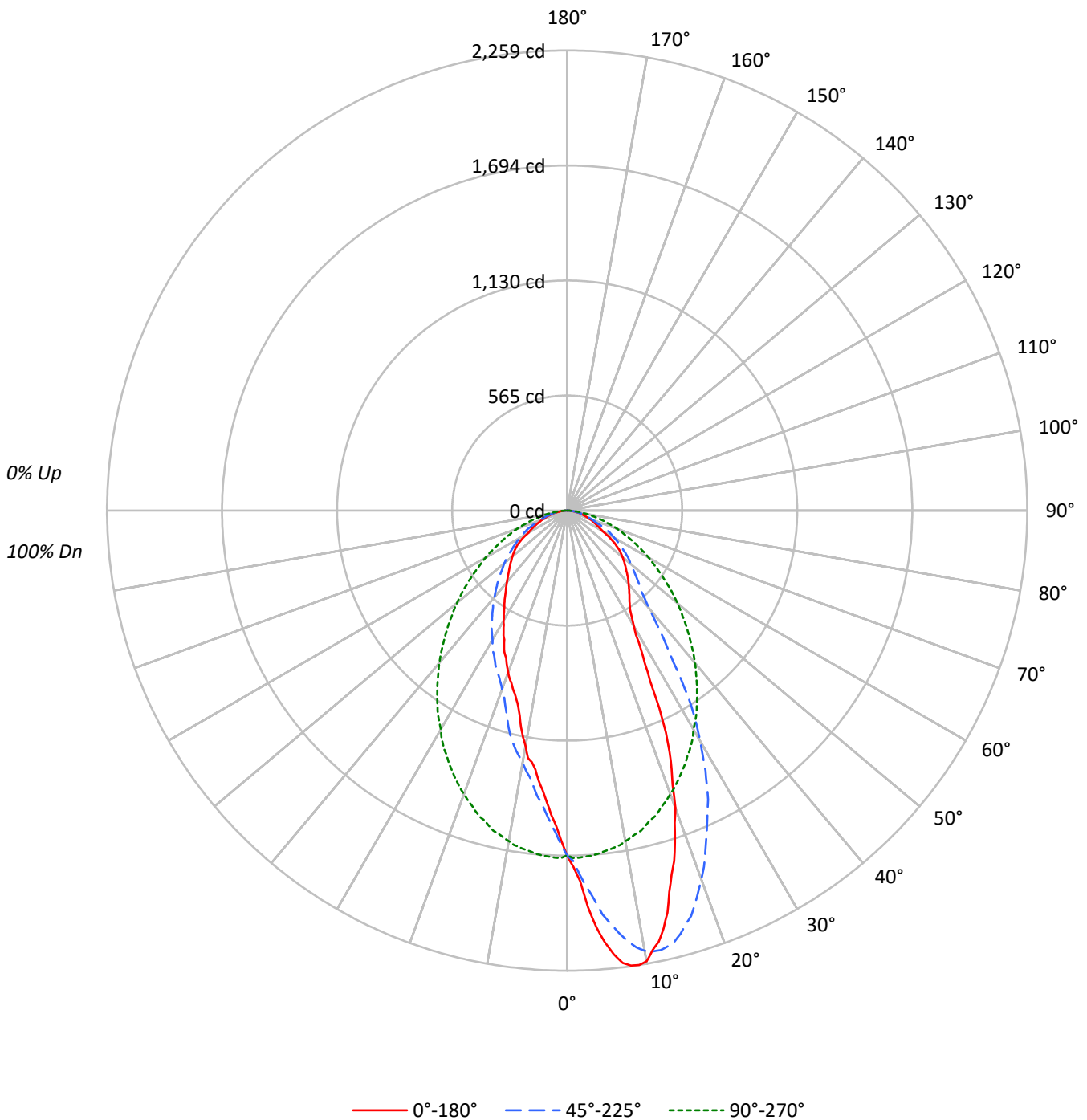
Input Watts (W): 35  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



TEST NUMBER: P735938

CATALOG NUMBER: S122RDR-S865D927-X4F0-XX-UDD-W-W

### Luminous Intensity Polar Plot



TEST NUMBER: P735938

CATALOG NUMBER: S122RDR-S865D927-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	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°	32540	32540	32540	32540	32540
5°	41051	38400	32664	27753	26577
10°	43851	42818	32167	24557	22949
15°	38571	42803	31318	22021	19123
20°	31797	39398	30318	19115	17305
25°	22670	34587	29104	17705	15567
30°	14507	29011	27542	16244	13827
35°	12493	21379	26109	15074	12540
40°	11775	15632	24497	13946	11520
45°	11123	13393	22774	12923	10876
50°	10595	12206	21156	12024	10472
55°	9722	11293	19343	11052	10097
60°	7669	10291	17768	10372	8530
65°	6945	9215	16114	9628	7777
70°	6407	7435	14646	8295	7149
75°	5971	6728	12774	7412	6728
80°	5523	6088	10815	6653	6088
85°	4940	5381	8314	5844	5381

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 67.5°  
 Vertical Angle: 45°  
 Luminance: 31877 cd/sqm



TEST NUMBER: P735938

CATALOG NUMBER: S122RDR-S865D927-X4F0-XX-UDD-W-W

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	164.2	5.7
10°-20°	441.2	15.2
20°-30°	553.4	19.1
30°-40°	527.3	18.2
40°-50°	465.2	16.0
50°-60°	365.9	12.6
60°-70°	233.5	8.0
70°-80°	118.7	4.1
80°-90°	31.5	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°	1158.8	39.9
0°-40°	1686.0	58.1
0°-60°	2517.1	86.8
0°-90°	2900.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2900.7	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1693	1693	1693	1693	1693	
5°	2128	1990	1693	1438	1377	207
15°	1938	2151	1574	1107	961	537
25°	1069	1631	1372	835	734	482
35°	532	911	1113	642	534	339
45°	409	493	838	475	400	317
55°	290	337	577	330	301	255
65°	153	203	354	212	171	153
75°	80	91	172	100	91	86
85°	22	24	38	26	24	25
90°	0	0	0	0	0	

TEST NUMBER: P735938

CATALOG NUMBER: S122RDR-S865D927-X4F0-XX-UDD-W-W

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	1692.9	1692.9	1692.9	1692.9	1692.9	1692.9	1692.9	1692.9	1692.9
1°	1749.9	1758.1	1720.4	1724.5	1706.2	1673.6	1642.0	1645.1	1622.7
2°	1820.2	1841.6	1789.6	1758.1	1705.1	1648.1	1585.0	1576.9	1549.4
3°	1947.4	1937.3	1851.7	1787.6	1701.1	1615.6	1536.2	1517.8	1494.4
4°	2050.2	2019.7	1914.9	1825.3	1699.0	1577.9	1488.3	1456.8	1433.3
5°	2127.6	2088.9	1990.2	1853.8	1692.9	1556.5	1438.4	1402.8	1377.4
6°	2189.7	2160.2	2039.1	1880.2	1684.8	1525.0	1408.9	1361.1	1334.6
7°	2237.6	2213.1	2088.9	1915.9	1677.7	1493.4	1362.1	1312.2	1280.6
8°	2255.9	2244.7	2134.7	1941.3	1669.5	1471.0	1320.3	1275.6	1247.0
9°	2258.9	2260.0	2171.4	1965.8	1662.4	1430.3	1290.8	1245.0	1229.7
10°	2246.7	2255.9	2193.8	1993.2	1648.1	1409.9	1258.2	1214.5	1175.8
11°	2198.9	2239.6	2205.0	2011.6	1635.9	1377.4	1229.7	1172.7	1134.1
12°	2163.2	2201.9	2206.0	2035.0	1621.7	1362.1	1205.3	1129.0	1088.2
13°	2104.2	2144.9	2195.8	2041.1	1613.5	1324.4	1174.8	1084.2	1034.3
14°	2034.0	2099.1	2179.5	2054.3	1593.2	1291.8	1144.2	1021.1	991.5
15°	1938.3	2030.9	2151.0	2059.4	1573.8	1269.4	1106.6	989.5	961.0
16°	1858.9	1963.7	2112.3	2059.4	1561.6	1238.9	1065.8	962.0	933.5
17°	1798.8	1884.3	2080.8	2060.4	1541.2	1217.5	1025.1	936.6	914.2
18°	1714.3	1810.0	2030.9	2056.4	1519.9	1192.1	990.5	915.2	887.7
19°	1620.7	1734.7	1978.0	2049.2	1501.5	1165.6	953.9	892.8	869.4
20°	1554.5	1659.3	1926.1	2038.0	1482.2	1148.3	934.5	867.3	846.0
21°	1443.5	1571.8	1874.1	2022.8	1461.8	1118.8	908.1	844.9	821.5
22.5°	1330.5	1448.6	1778.4	1997.3	1428.3	1082.1	878.5	817.5	782.8
23°	1286.8	1419.1	1748.9	1990.2	1417.1	1073.0	869.4	805.2	774.7
24°	1193.1	1330.5	1687.8	1967.8	1392.6	1042.4	852.1	780.8	759.4
25°	1068.9	1255.2	1630.8	1944.4	1372.3	1020.0	834.8	761.5	734.0
26°	928.4	1152.4	1578.9	1915.9	1343.8	989.5	811.3	743.1	704.5
27°	841.9	1063.8	1508.7	1885.3	1323.4	967.1	792.0	715.7	688.2
28°	772.7	924.3	1445.6	1855.8	1299.0	939.6	778.8	696.3	663.7
29°	697.3	848.0	1371.2	1816.1	1272.5	908.1	757.4	677.0	642.4
30°	653.6	766.6	1307.1	1786.6	1240.9	886.7	731.9	657.6	623.0
32.5°	574.2	632.2	1133.0	1702.1	1180.9	825.6	690.2	604.7	575.2
35°	532.4	563.0	911.1	1603.3	1112.7	774.7	642.4	560.9	534.4
37.5°	500.9	519.2	752.3	1497.5	1043.4	729.9	598.6	520.2	494.7
40°	469.3	483.5	623.0	1395.7	976.3	686.1	555.8	478.5	459.1
42.5°	440.8	452.0	540.6	1294.9	907.0	641.3	514.1	445.9	428.6
45°	409.2	419.4	492.7	1172.7	837.8	595.5	475.4	410.3	400.1
47.5°	382.8	389.9	446.9	1063.8	769.6	551.8	435.7	381.7	374.6
50°	354.3	363.4	408.2	942.7	707.5	509.0	402.1	356.3	350.2
52.5°	326.8	330.8	375.6	821.5	642.4	467.3	366.5	330.8	326.8
55°	290.1	306.4	337.0	697.3	577.2	428.6	329.8	304.4	301.3
57.5°	248.4	269.8	302.3	585.3	516.1	385.8	300.3	279.9	266.7
60°	199.5	225.0	267.7	486.6	462.2	347.1	269.8	238.2	221.9
62.5°	175.1	183.2	236.2	407.2	407.2	310.5	239.2	204.6	197.5
65°	152.7	158.8	202.6	337.0	354.3	269.8	211.7	177.1	171.0



TEST NUMBER: P735938

CATALOG NUMBER: S122RDR-S865D927-X4F0-XX-UDD-W-W

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	133.4	138.4	154.7	281.0	305.4	235.2	175.1	154.7	147.6
70°	114.0	118.1	132.3	229.0	260.6	200.5	147.6	132.3	127.2
72.5°	96.7	100.8	108.9	172.0	213.8	167.0	124.2	113.0	108.9
75°	80.4	82.5	90.6	128.3	172.0	133.4	99.8	92.6	90.6
77.5°	65.2	66.2	71.3	91.6	133.4	101.8	80.4	74.3	73.3
80°	49.9	50.9	55.0	66.2	97.7	73.3	60.1	57.0	55.0
82.5°	35.6	36.6	38.7	44.8	66.2	49.9	42.8	41.7	38.7
85°	22.4	22.4	24.4	27.5	37.7	28.5	26.5	25.4	24.4
87.5°	10.2	10.2	11.2	11.2	17.3	12.2	12.2	11.2	10.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)