

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: P735893

Luminaire Tested: S122DR-S865D927-X4F0-XX-UDD-W-W

Issue Date: 1/24/2024

Test Information

Test Method: LM-79-2019
Report Number: P735893
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: S122DR-S865D927-X4F0-XX-UDD-W-W
Description: DEFINE 2 DIRECT RECESSED WITH WALL WASH OPTIC
Light Source: 2700K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3013.7 lumens
Efficiency: N/A
Efficacy: 86.1 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

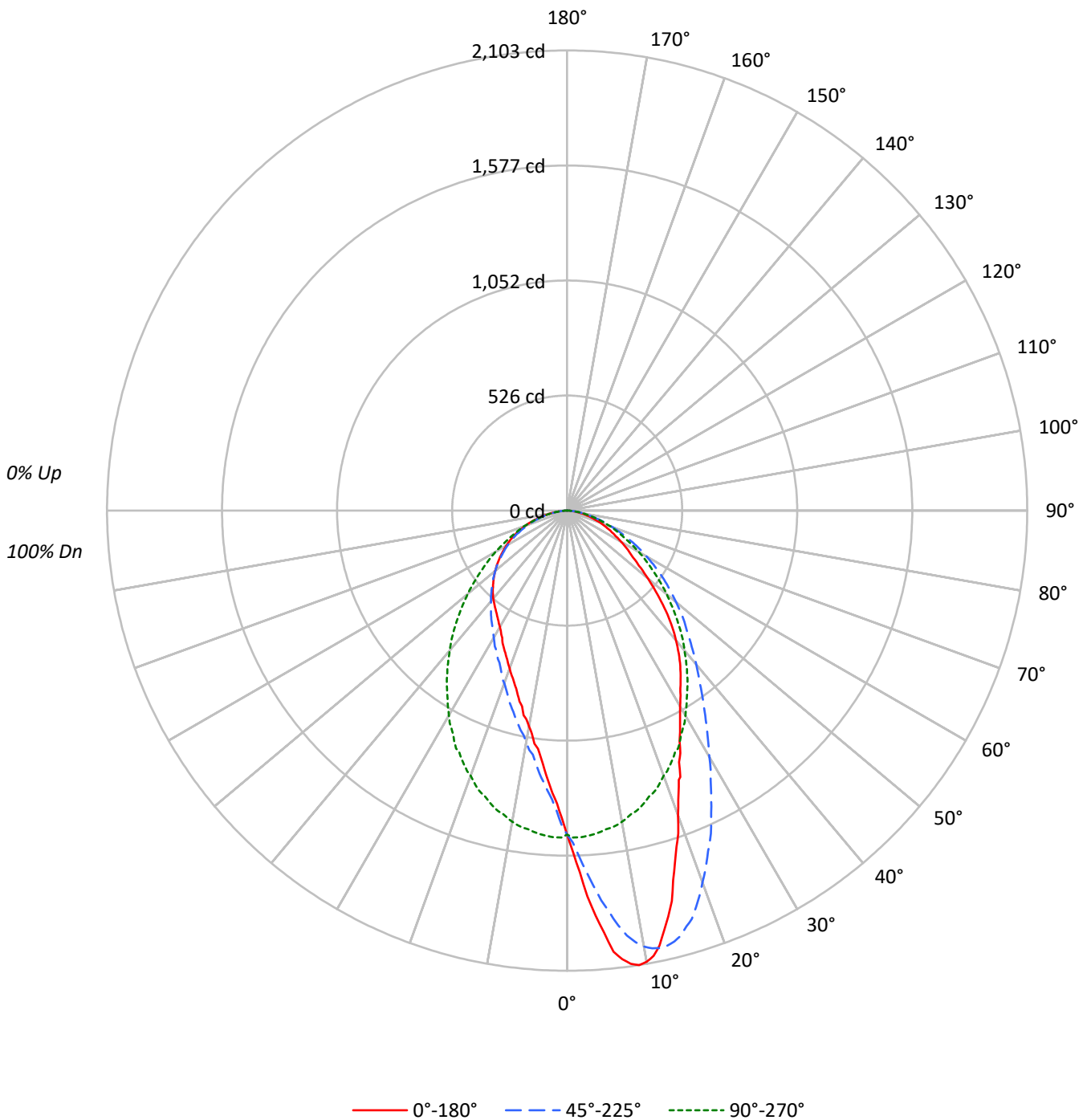
Input Watts (W): 35
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P735893

CATALOG NUMBER: S122DR-S865D927-X4F0-XX-UDD-W-W

Luminous Intensity Polar Plot



TEST NUMBER: P735893

CATALOG NUMBER: S122DR-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	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°	28471	28471	28471	28471	28471
5°	37339	34510	28618	24003	22903
10°	40870	39500	28193	20982	19551
15°	36768	40008	27429	18940	17340
20°	30339	37003	26383	17178	15722
25°	25929	33011	25454	15889	14572
30°	22934	28831	23995	14891	13648
35°	21212	25534	22503	14189	13258
40°	19413	23039	20946	13590	13181
45°	17101	21031	19371	13173	13007
50°	14398	19392	17747	12816	12846
55°	12111	17841	16035	12382	12624
60°	10918	16123	14558	12013	12367
65°	9910	14167	12962	11434	12130
70°	8924	12246	11673	10582	11498
75°	7790	10360	9981	9603	10509
80°	6531	8114	8114	8335	8789
85°	4940	5844	6065	6506	6285

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 30883 cd/sqm



TEST NUMBER: P735893

CATALOG NUMBER: S122DR-S865D927-X4F0-XX-UDD-W-W

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	145.8	4.8
10°-20°	400.1	13.3
20°-30°	524.7	17.4
30°-40°	554.5	18.4
40°-50°	514.9	17.1
50°-60°	412.1	13.7
60°-70°	281.8	9.4
70°-80°	145.4	4.8
80°-90°	34.5	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°	1070.5	35.5
0°-40°	1625.0	53.9
0°-60°	2551.9	84.7
0°-90°	3013.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3013.7	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1481	1481	1481	1481	1481	
5°	1935	1789	1483	1244	1187	191
15°	1848	2010	1378	952	871	507
25°	1223	1556	1200	749	687	563
35°	904	1088	959	605	565	564
45°	629	774	713	485	478	483
55°	361	532	478	370	377	331
65°	218	312	285	251	267	216
75°	105	140	134	129	142	112
85°	22	26	28	30	28	27
90°	0	0	0	0	0	



TEST NUMBER: P735893

CATALOG NUMBER: S122DR-S865D927-X4F0-XX-UDD-W-W

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	1481.2	1481.2	1481.2	1481.2	1481.2	1481.2	1481.2	1481.2	1481.2
1°	1562.6	1554.5	1518.9	1520.9	1494.4	1464.9	1437.4	1420.1	1405.9
2°	1654.2	1638.0	1582.0	1554.5	1494.4	1431.3	1374.3	1359.0	1339.7
3°	1765.2	1726.5	1649.2	1584.0	1492.4	1400.8	1322.4	1294.9	1291.8
4°	1854.8	1820.2	1717.4	1614.5	1487.3	1371.2	1282.7	1253.2	1238.9
5°	1935.2	1912.8	1788.6	1653.2	1483.2	1342.7	1244.0	1203.3	1187.0
6°	2027.8	1982.0	1845.6	1691.9	1476.1	1315.3	1209.4	1160.5	1138.1
7°	2065.5	2037.0	1909.8	1717.4	1466.9	1283.7	1165.6	1112.7	1096.4
8°	2092.0	2080.8	1960.7	1759.1	1462.9	1254.2	1126.9	1094.3	1075.0
9°	2103.2	2094.0	1997.3	1776.4	1455.7	1238.9	1107.6	1053.6	1032.2
10°	2094.0	2098.1	2023.8	1802.9	1444.5	1207.3	1075.0	1028.2	1001.7
11°	2072.6	2082.8	2038.0	1833.4	1430.3	1181.9	1045.5	997.6	972.2
12°	2031.9	2054.3	2044.1	1854.8	1417.1	1159.5	1025.1	979.3	956.9
13°	1968.8	2018.7	2040.1	1864.0	1408.9	1134.0	999.7	946.7	918.2
14°	1911.8	1963.7	2028.9	1884.3	1394.7	1105.5	976.3	923.3	898.9
15°	1847.7	1907.7	2010.5	1890.4	1378.4	1082.1	951.8	893.8	871.4
16°	1758.1	1838.5	1976.9	1897.5	1359.0	1055.7	929.4	874.5	844.9
17°	1683.8	1770.3	1951.5	1901.6	1348.8	1035.3	910.1	844.9	825.6
18°	1615.6	1713.3	1905.7	1898.6	1332.6	1011.9	881.6	823.6	805.2
19°	1561.6	1641.0	1859.9	1891.4	1310.2	989.5	860.2	808.3	786.9
20°	1483.2	1574.8	1809.0	1888.4	1289.8	969.1	839.8	786.9	768.6
21°	1418.1	1511.7	1762.2	1878.2	1275.5	949.8	824.6	766.6	750.3
22.5°	1332.6	1415.0	1683.8	1858.9	1244.0	917.2	791.0	747.2	724.8
23°	1322.4	1392.6	1663.4	1852.8	1234.8	910.1	779.8	736.0	717.7
24°	1258.2	1332.6	1615.6	1833.4	1211.4	887.7	761.5	722.8	701.4
25°	1222.6	1283.7	1556.5	1815.1	1200.2	867.3	749.2	705.5	687.1
26°	1172.7	1243.0	1503.6	1788.6	1175.8	849.0	729.9	690.2	672.9
27°	1136.1	1195.1	1448.6	1769.3	1147.3	829.7	714.6	674.9	653.6
28°	1100.5	1157.5	1395.7	1737.7	1126.9	808.3	703.4	661.7	641.3
29°	1063.8	1113.7	1352.9	1713.3	1107.6	790.0	686.1	644.4	625.0
30°	1033.3	1079.1	1299.0	1680.7	1081.1	768.6	670.9	632.2	614.9
32.5°	963.0	1001.7	1189.0	1603.3	1018.0	725.8	634.2	598.6	588.4
35°	904.0	929.4	1088.2	1516.8	959.0	680.0	604.7	570.1	565.0
37.5°	841.9	866.3	996.6	1426.2	896.9	638.3	571.1	548.7	544.6
40°	773.7	806.3	918.2	1336.6	834.8	597.6	541.6	524.3	525.3
42.5°	705.5	743.1	841.9	1231.8	776.7	558.9	513.1	500.9	502.9
45°	629.1	677.0	773.7	1136.1	712.6	522.2	484.6	478.5	478.5
47.5°	549.7	610.8	714.6	1037.3	651.5	485.6	457.1	453.0	455.0
50°	481.5	536.5	648.5	941.6	593.5	452.0	428.6	427.6	429.6
52.5°	414.3	469.3	590.4	852.1	534.4	421.5	401.1	401.1	403.1
55°	361.4	404.1	532.4	758.4	478.5	385.8	369.5	372.6	376.7
57.5°	324.7	353.2	475.4	668.8	426.5	351.2	341.0	343.1	348.2
60°	284.0	306.4	419.4	586.4	378.7	317.6	312.5	316.6	321.7
62.5°	247.4	266.7	366.5	512.1	326.8	285.0	283.0	289.1	294.2
65°	217.9	231.1	311.5	436.7	285.0	252.5	251.4	260.6	266.7



TEST NUMBER: P735893

CATALOG NUMBER: S122DR-S865D927-X4F0-XX-UDD-W-W

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	187.3	197.5	263.7	365.5	243.3	219.9	219.9	230.1	235.2
70°	158.8	167.0	217.9	301.3	207.7	187.3	188.3	200.5	204.6
72.5°	129.3	136.4	177.1	242.3	168.0	156.8	159.8	170.0	174.1
75°	104.9	109.9	139.5	191.4	134.4	125.2	129.3	138.4	141.5
77.5°	80.4	84.5	102.8	140.5	102.8	97.7	101.8	109.9	109.9
80°	59.0	60.1	73.3	98.7	73.3	70.2	75.3	79.4	79.4
82.5°	38.7	40.7	47.8	63.1	48.9	47.8	49.9	52.9	52.9
85°	22.4	23.4	26.5	34.6	27.5	27.5	29.5	29.5	28.5
87.5°	9.2	10.2	11.2	13.2	12.2	13.2	13.2	11.2	12.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)