

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: P735893

Luminaire Tested: S122DRP-S865D927-X4F0-XX-UDD-W-W

Issue Date: 1/24/2024

Test Information

Test Method: LM-79-2024
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: S122DRP-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

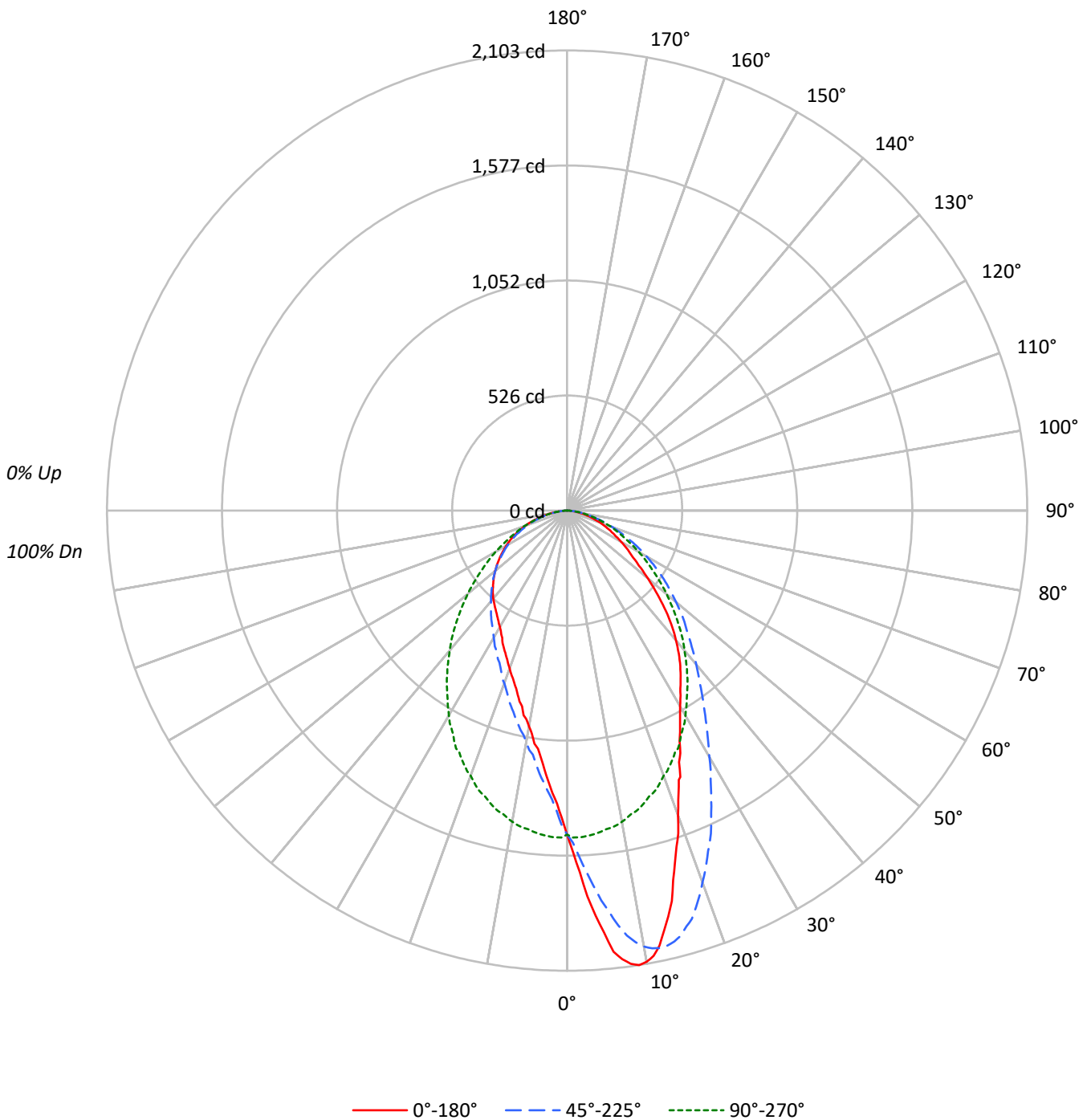
Lumens per Lamp: N/A
Luminaire Lumens: 3013.7 lumens
Efficiency: N/A
Efficacy: 86.1 lumens/watt
Spacing Criteria (0/90/45): 0.9 / 1.11 / 1.12
Luminous Opening: Rectangular (W 4' x L: 0.14' x H: 0')
CIE Type: Direct

Input Watts (W): 35
Input Voltage (V): 120
Input Current (A_{in}): 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: S122DRP-S865D927-X4F0-XX-UDD-W-W

Luminous Intensity Polar Plot



TEST NUMBER: P735893

CATALOG NUMBER: S122DRP-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					86			
2	101	94	87	82	98	92	86	81	88	83	79	85	81	78	82	79	76	74					74			
3	93	83	76	70	91	82	75	69	79	73	68	76	71	67	74	69	66	64					64			
4	86	75	67	60	83	73	66	60	71	64	59	69	63	58	67	62	58	56					56			
5	79	67	59	53	77	66	58	53	64	57	52	62	56	52	61	55	51	49					49			
6	74	61	53	47	72	60	52	47	59	52	46	57	51	46	55	50	46	44					44			
7	69	56	48	42	67	55	47	42	54	47	42	52	46	41	51	45	41	39					39			
8	64	51	43	38	63	51	43	38	50	43	38	48	42	37	47	41	37	35					35			
9	60	48	40	35	59	47	40	34	46	39	34	45	39	34	44	38	34	32					32			
10	57	44	37	32	55	44	36	32	43	36	31	42	36	31	41	35	31	30					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: S122DRP-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: S122DRP-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: S122DRP-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

TEST NUMBER: P735893
 CATALOG NUMBER: S122DRP-S865D927-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	20.85	22.38	21.22	22.69	23.00	20.43	21.95	20.79	22.27	22.58
	3H	22.06	23.42	22.43	23.75	24.11	21.94	23.31	22.32	23.64	24.00
	4H	22.45	23.74	22.85	24.08	24.46	22.47	23.75	22.87	24.10	24.48
	6H	22.71	23.89	23.12	24.26	24.65	22.82	24.01	23.23	24.37	24.76
	8H	22.77	23.90	23.19	24.29	24.69	22.92	24.05	23.34	24.44	24.84
	12H	22.80	23.88	23.23	24.26	24.69	22.97	24.05	23.40	24.43	24.86
4H	2H	21.91	23.19	22.31	23.54	23.92	21.50	22.78	21.90	23.13	23.51
	3H	23.27	24.34	23.68	24.74	25.14	23.13	24.19	23.54	24.59	24.99
	4H	23.73	24.69	24.17	25.11	25.55	23.71	24.67	24.14	25.08	25.52
	6H	24.05	24.88	24.50	25.32	25.78	24.13	24.96	24.58	25.40	25.86
	8H	24.13	24.90	24.59	25.35	25.82	24.24	25.02	24.71	25.47	25.94
	12H	24.17	24.87	24.66	25.35	25.82	24.32	25.02	24.80	25.49	25.97
8H	4H	24.09	24.87	24.55	25.31	25.78	24.05	24.83	24.51	25.27	25.74
	6H	24.49	25.14	24.99	25.63	26.10	24.57	25.21	25.06	25.70	26.18
	8H	24.61	25.19	25.13	25.70	26.19	24.73	25.31	25.25	25.82	26.31
	12H	24.70	25.21	25.21	25.70	26.27	24.86	25.37	25.37	25.86	26.42
12H	4H	24.11	24.81	24.60	25.29	25.76	24.07	24.76	24.55	25.24	25.71
	6H	24.54	25.12	25.05	25.63	26.11	24.61	25.19	25.12	25.70	26.18
	8H	24.71	25.22	25.22	25.71	26.27	24.83	25.34	25.34	25.83	26.39