

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: P735859

Luminaire Tested: S122DR-S1005D935-X4F0-XX-UDD-W-W

Issue Date: 1/24/2024

Test Information

Test Method: LM-79-2019
Report Number: P735859
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-S1005D935-X4F0-XX-UDD-W-W
Description: DEFINE 2 DIRECT RECESSED WITH WALL WASH OPTIC
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3844.1 lumens
Efficiency: N/A
Efficacy: 92.0 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

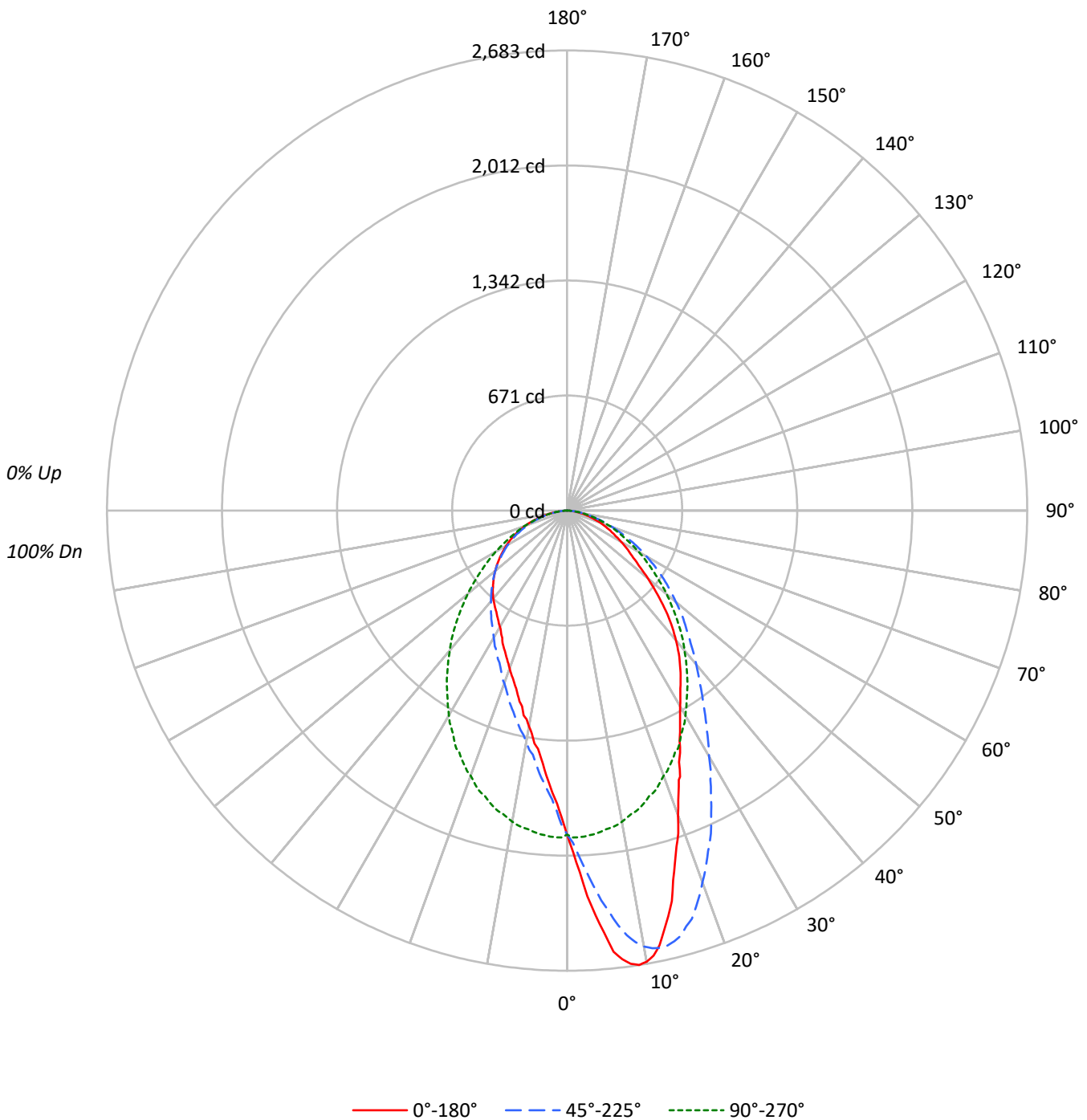
Input Watts (W): 41.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P735859

CATALOG NUMBER: S122DR-S1005D935-X4F0-XX-UDD-W-W

Luminous Intensity Polar Plot



TEST NUMBER: P735859

CATALOG NUMBER: S122DR-S1005D935-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°	36315	36315	36315	36315	36315
5°	47629	44021	36504	30617	29214
10°	52132	50383	35963	26763	24938
15°	46899	51032	34987	24160	22118
20°	38699	47198	33652	21913	20054
25°	33074	42107	32468	20269	18589
30°	29253	36775	30607	18992	17407
35°	27057	32572	28702	18098	16911
40°	24763	29387	26718	17333	16811
45°	21814	26827	24709	16802	16590
50°	18366	24733	22637	16348	16387
55°	15449	22758	20452	15797	16099
60°	13928	20567	18568	15323	15773
65°	12639	18070	16537	14586	15473
70°	11386	15618	14887	13499	14668
75°	9929	13212	12729	12246	13405
80°	8335	10350	10350	10637	11213
85°	6307	7454	7741	8314	8028

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 39391 cd/sqm



TEST NUMBER: P735859

CATALOG NUMBER: S122DR-S1005D935-X4F0-XX-UDD-W-W

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	185.9	4.8
10°-20°	510.3	13.3
20°-30°	669.2	17.4
30°-40°	707.3	18.4
40°-50°	656.7	17.1
50°-60°	525.6	13.7
60°-70°	359.5	9.4
70°-80°	185.5	4.8
80°-90°	44.1	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°	1365.4	35.5
0°-40°	2072.8	53.9
0°-60°	3255.1	84.7
0°-90°	3844.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3844.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1889	1889	1889	1889	1889	
5°	2468	2282	1892	1587	1514	243
15°	2357	2564	1758	1214	1112	647
25°	1560	1985	1531	956	876	719
35°	1153	1388	1223	771	721	720
45°	802	987	909	618	610	616
55°	461	679	610	471	480	422
65°	278	397	364	321	340	276
75°	134	178	171	165	180	142
85°	29	34	35	38	36	35
90°	0	0	0	0	0	



TEST NUMBER: P735859

CATALOG NUMBER: S122DR-S1005D935-X4F0-XX-UDD-W-W

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	1889.3	1889.3	1889.3	1889.3	1889.3	1889.3	1889.3	1889.3	1889.3
1°	1993.2	1982.8	1937.4	1940.0	1906.2	1868.5	1833.5	1811.4	1793.2
2°	2110.1	2089.3	2017.9	1982.8	1906.2	1825.7	1753.0	1733.5	1708.8
3°	2251.6	2202.3	2103.6	2020.5	1903.6	1786.7	1686.8	1651.7	1647.8
4°	2365.9	2321.7	2190.6	2059.4	1897.1	1749.1	1636.1	1598.5	1580.3
5°	2468.5	2439.9	2281.5	2108.8	1891.9	1712.7	1586.8	1534.8	1514.1
6°	2586.6	2528.2	2354.2	2158.1	1882.8	1677.7	1542.6	1480.3	1451.7
7°	2634.7	2598.3	2436.0	2190.6	1871.1	1637.4	1486.8	1419.3	1398.5
8°	2668.4	2654.1	2500.9	2243.8	1865.9	1599.8	1437.4	1395.9	1371.2
9°	2682.7	2671.0	2547.7	2265.9	1856.9	1580.3	1412.8	1344.0	1316.7
10°	2671.0	2676.2	2581.4	2299.6	1842.6	1540.0	1371.2	1311.5	1277.7
11°	2643.8	2656.7	2599.6	2338.6	1824.4	1507.6	1333.6	1272.5	1240.1
12°	2591.8	2620.4	2607.4	2365.9	1807.5	1479.0	1307.6	1249.2	1220.6
13°	2511.3	2574.9	2602.2	2377.6	1797.1	1446.5	1275.1	1207.6	1171.2
14°	2438.6	2504.8	2587.9	2403.5	1778.9	1410.2	1245.3	1177.7	1146.6
15°	2356.8	2433.4	2564.5	2411.3	1758.2	1380.3	1214.1	1140.1	1111.5
16°	2242.5	2345.1	2521.7	2420.4	1733.5	1346.5	1185.5	1115.4	1077.8
17°	2147.7	2258.1	2489.2	2425.6	1720.5	1320.6	1160.9	1077.8	1053.1
18°	2060.7	2185.4	2430.8	2421.7	1699.7	1290.7	1124.5	1050.5	1027.1
19°	1991.9	2093.2	2372.4	2412.6	1671.2	1262.1	1097.2	1031.0	1003.7
20°	1891.9	2008.8	2307.4	2408.7	1645.2	1236.2	1071.3	1003.7	980.4
21°	1808.8	1928.3	2247.7	2395.7	1627.0	1211.5	1051.8	977.8	957.0
22.5°	1699.7	1804.9	2147.7	2371.1	1586.8	1170.0	1008.9	953.1	924.5
23°	1686.8	1776.4	2121.8	2363.3	1575.1	1160.9	994.7	938.8	915.4
24°	1604.9	1699.7	2060.7	2338.6	1545.2	1132.3	971.3	921.9	894.7
25°	1559.5	1637.4	1985.4	2315.2	1530.9	1106.3	955.7	899.9	876.5
26°	1495.9	1585.5	1917.9	2281.5	1499.8	1083.0	931.0	880.4	858.3
27°	1449.1	1524.4	1847.8	2256.8	1463.4	1058.3	911.5	860.9	833.6
28°	1403.7	1476.4	1780.2	2216.5	1437.4	1031.0	897.3	844.0	818.1
29°	1356.9	1420.6	1725.7	2185.4	1412.8	1007.6	875.2	822.0	797.3
30°	1318.0	1376.4	1656.9	2143.8	1379.0	980.4	855.7	806.4	784.3
32.5°	1228.4	1277.7	1516.7	2045.1	1298.5	925.8	809.0	763.5	750.5
35°	1153.1	1185.5	1388.1	1934.8	1223.2	867.4	771.3	727.2	720.7
37.5°	1073.9	1105.0	1271.2	1819.2	1144.0	814.2	728.5	699.9	694.7
40°	986.9	1028.4	1171.2	1704.9	1064.8	762.2	690.8	668.7	670.0
42.5°	899.9	947.9	1073.9	1571.2	990.8	712.9	654.4	638.9	641.5
45°	802.5	863.5	986.9	1449.1	909.0	666.1	618.1	610.3	610.3
47.5°	701.2	779.1	911.5	1323.2	831.0	619.4	583.0	577.8	580.4
50°	614.2	684.3	827.1	1201.1	757.0	576.5	546.7	545.4	548.0
52.5°	528.5	598.6	753.1	1086.8	681.7	537.6	511.6	511.6	514.2
55°	461.0	515.5	679.1	967.4	610.3	492.1	471.4	475.3	480.4
57.5°	414.2	450.6	606.4	853.1	544.1	448.0	435.0	437.6	444.1
60°	362.3	390.8	535.0	747.9	483.0	405.1	398.6	403.8	410.3
62.5°	315.5	340.2	467.5	653.1	416.8	363.6	361.0	368.8	375.3
65°	277.9	294.8	397.3	557.1	363.6	322.0	320.7	332.4	340.2



TEST NUMBER: P735859

CATALOG NUMBER: S122DR-S1005D935-X4F0-XX-UDD-W-W

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	238.9	251.9	336.3	466.2	310.3	280.5	280.5	293.5	300.0
70°	202.6	213.0	277.9	384.4	264.9	238.9	240.2	255.8	261.0
72.5°	164.9	174.0	225.9	309.0	214.3	200.0	203.9	216.8	222.0
75°	133.7	140.2	177.9	244.1	171.4	159.7	164.9	176.6	180.5
77.5°	102.6	107.8	131.1	179.2	131.1	124.7	129.9	140.2	140.2
80°	75.3	76.6	93.5	126.0	93.5	89.6	96.1	101.3	101.3
82.5°	49.3	51.9	61.0	80.5	62.3	61.0	63.6	67.5	67.5
85°	28.6	29.9	33.8	44.1	35.1	35.1	37.7	37.7	36.4
87.5°	11.7	13.0	14.3	16.9	15.6	16.9	16.9	14.3	15.6
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)