

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: P735887

Luminaire Tested: S122DR-S675D940-X4F0-XX-UDD-W-W

Issue Date: 1/24/2024

Test Information

Test Method: LM-79-2019
Report Number: P735887
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-S675D940-X4F0-XX-UDD-W-W
Description: DEFINE 2 DIRECT RECESSED WITH WALL WASH OPTIC
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2639.8 lumens
Efficiency: N/A
Efficacy: 101.5 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

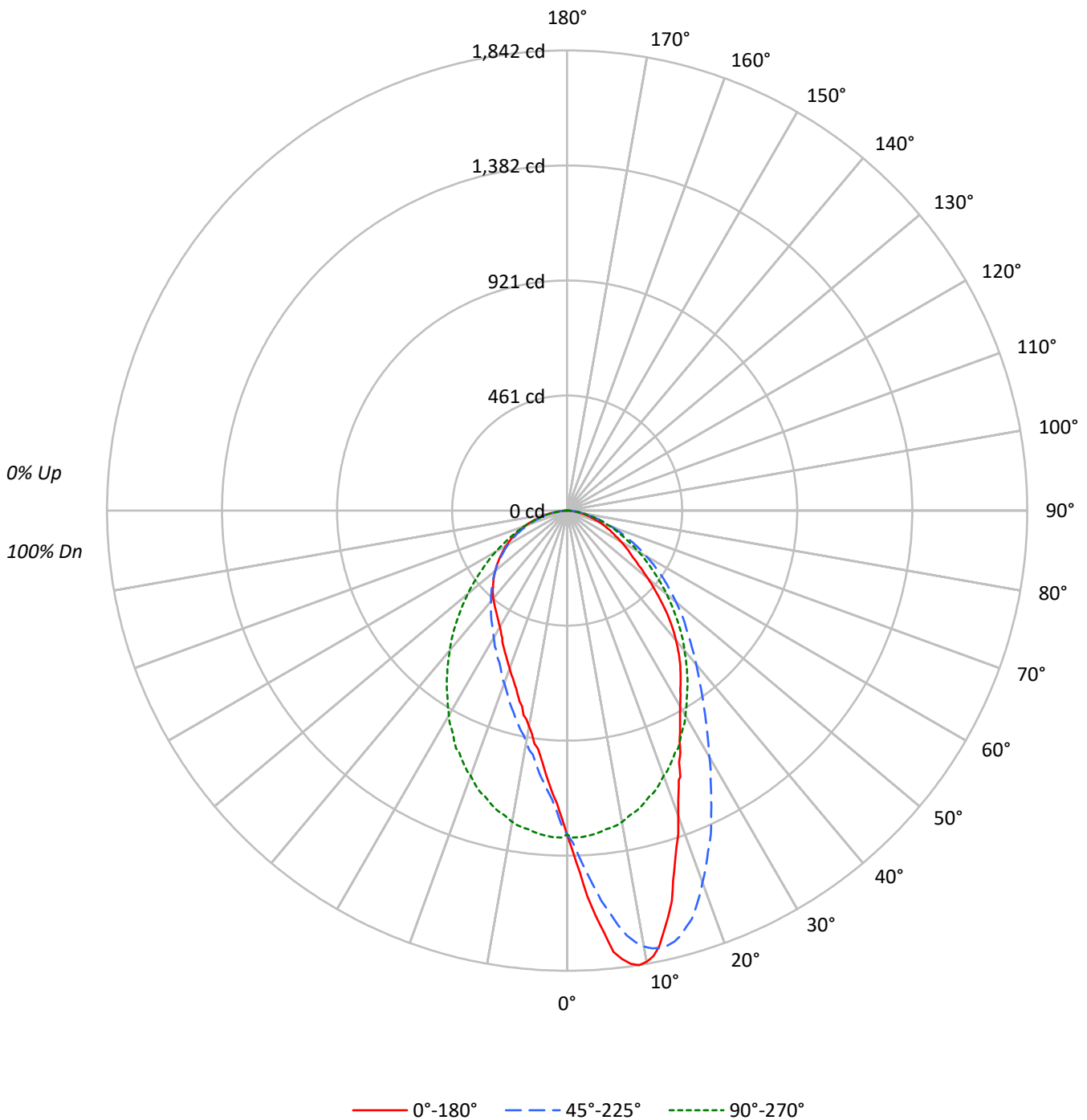
Input Watts (W): 26
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P735887

CATALOG NUMBER: S122DR-S675D940-X4F0-XX-UDD-W-W

Luminous Intensity Polar Plot



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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°	24938	24938	24938	24938	24938
5°	32706	30229	25068	21025	20061
10°	35800	34599	24696	18378	17125
15°	32207	35045	24026	16590	15189
20°	26575	32413	23110	15049	13770
25°	22712	28915	22296	13919	12765
30°	20089	25253	21018	13042	11954
35°	18579	22367	19710	12429	11613
40°	17005	20181	18347	11903	11545
45°	14981	18422	16968	11539	11392
50°	12613	16985	15547	11226	11252
55°	10610	15630	14045	10848	11055
60°	9565	14124	12751	10526	10833
65°	8678	12412	11357	10020	10624
70°	7817	10723	10223	9273	10071
75°	6818	9075	8741	8407	9201
80°	5723	7106	7106	7306	7704
85°	4323	5117	5315	5712	5513

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 27050 cd/sqm



TEST NUMBER: P735887

CATALOG NUMBER: S122DR-S675D940-X4F0-XX-UDD-W-W

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	127.7	4.8
10°-20°	350.4	13.3
20°-30°	459.6	17.4
30°-40°	485.7	18.4
40°-50°	451.0	17.1
50°-60°	360.9	13.7
60°-70°	246.9	9.4
70°-80°	127.4	4.8
80°-90°	30.3	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°	937.7	35.5
0°-40°	1423.4	53.9
0°-60°	2235.3	84.7
0°-90°	2639.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2639.8	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1297	1297	1297	1297	1297	
5°	1695	1567	1299	1090	1040	167
15°	1618	1761	1207	834	763	444
25°	1071	1363	1051	656	602	494
35°	792	953	840	530	495	494
45°	551	678	624	424	419	423
55°	317	466	419	324	330	290
65°	191	273	250	220	234	189
75°	92	122	118	113	124	98
85°	20	23	24	26	25	24
90°	0	0	0	0	0	



TEST NUMBER: P735887

CATALOG NUMBER: S122DR-S675D940-X4F0-XX-UDD-W-W

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	1297.4	1297.4	1297.4	1297.4	1297.4	1297.4	1297.4	1297.4	1297.4
1°	1368.8	1361.6	1330.4	1332.2	1309.0	1283.2	1259.1	1243.9	1231.5
2°	1449.0	1434.8	1385.7	1361.6	1309.0	1253.7	1203.8	1190.4	1173.5
3°	1546.2	1512.3	1444.6	1387.5	1307.2	1227.0	1158.3	1134.3	1131.6
4°	1624.7	1594.4	1504.3	1414.3	1302.8	1201.1	1123.6	1097.7	1085.2
5°	1695.1	1675.5	1566.7	1448.1	1299.2	1176.2	1089.7	1054.0	1039.7
6°	1776.3	1736.2	1616.7	1482.0	1293.0	1152.1	1059.4	1016.5	996.9
7°	1809.3	1784.3	1672.8	1504.3	1285.0	1124.4	1021.0	974.6	960.4
8°	1832.5	1822.7	1717.4	1540.9	1281.4	1098.6	987.1	958.6	941.6
9°	1842.3	1834.2	1749.5	1556.0	1275.1	1085.2	970.2	922.9	904.2
10°	1834.2	1837.8	1772.7	1579.2	1265.3	1057.6	941.6	900.6	877.4
11°	1815.5	1824.4	1785.2	1606.0	1252.9	1035.3	915.8	873.9	851.6
12°	1779.9	1799.5	1790.6	1624.7	1241.3	1015.7	898.0	857.8	838.2
13°	1724.6	1768.3	1787.0	1632.7	1234.1	993.4	875.7	829.3	804.3
14°	1674.6	1720.1	1777.2	1650.6	1221.6	968.4	855.1	808.8	787.4
15°	1618.5	1671.1	1761.1	1655.9	1207.4	947.9	833.7	782.9	763.3
16°	1540.0	1610.4	1731.7	1662.1	1190.4	924.7	814.1	766.0	740.1
17°	1474.9	1550.7	1709.4	1665.7	1181.5	906.9	797.2	740.1	723.2
18°	1415.1	1500.7	1669.3	1663.0	1167.2	886.4	772.2	721.4	705.3
19°	1367.9	1437.4	1629.2	1656.8	1147.6	866.7	753.5	708.0	689.3
20°	1299.2	1379.5	1584.6	1654.1	1129.8	848.9	735.7	689.3	673.2
21°	1242.2	1324.2	1543.5	1645.2	1117.3	832.0	722.3	671.5	657.2
22.5°	1167.2	1239.5	1474.9	1628.3	1089.7	803.4	692.9	654.5	634.9
23°	1158.3	1219.9	1457.1	1622.9	1081.6	797.2	683.0	644.7	628.7
24°	1102.2	1167.2	1415.1	1606.0	1061.1	777.6	667.0	633.1	614.4
25°	1070.9	1124.4	1363.4	1589.9	1051.3	759.7	656.3	618.0	601.9
26°	1027.2	1088.8	1317.1	1566.7	1029.9	743.7	639.4	604.6	589.4
27°	995.1	1046.9	1268.9	1549.8	1005.0	726.7	626.0	591.2	572.5
28°	963.9	1013.9	1222.5	1522.1	987.1	708.0	616.2	579.6	561.8
29°	931.8	975.5	1185.1	1500.7	970.2	692.0	601.0	564.5	547.5
30°	905.1	945.2	1137.8	1472.2	947.0	673.2	587.6	553.8	538.6
32.5°	843.6	877.4	1041.5	1404.4	891.7	635.8	555.5	524.3	515.4
35°	791.8	814.1	953.2	1328.6	840.0	595.7	529.7	499.4	494.9
37.5°	737.4	758.8	873.0	1249.3	785.6	559.1	500.2	480.6	477.1
40°	677.7	706.2	804.3	1170.8	731.2	523.4	474.4	459.2	460.1
42.5°	618.0	650.9	737.4	1079.0	680.4	489.5	449.4	438.7	440.5
45°	551.1	593.0	677.7	995.1	624.2	457.4	424.5	419.1	419.1
47.5°	481.5	535.0	626.0	908.7	570.7	425.3	400.4	396.8	398.6
50°	421.8	469.9	568.0	824.8	519.9	395.9	375.4	374.5	376.3
52.5°	362.9	411.1	517.2	746.4	468.1	369.2	351.3	351.3	353.1
55°	316.6	354.0	466.4	664.3	419.1	338.0	323.7	326.4	329.9
57.5°	284.5	309.4	416.4	585.9	373.6	307.6	298.7	300.5	305.0
60°	248.8	268.4	367.4	513.6	331.7	278.2	273.8	277.3	281.8
62.5°	216.7	233.6	321.0	448.5	286.2	249.7	247.9	253.2	257.7
65°	190.8	202.4	272.9	382.5	249.7	221.1	220.3	228.3	233.6



TEST NUMBER: P735887

CATALOG NUMBER: S122DR-S675D940-X4F0-XX-UDD-W-W

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	164.1	173.0	231.0	320.1	213.1	192.6	192.6	201.5	206.0
70°	139.1	146.2	190.8	263.9	181.9	164.1	165.0	175.7	179.2
72.5°	113.2	119.5	155.2	212.2	147.1	137.3	140.0	148.9	152.5
75°	91.8	96.3	122.2	167.6	117.7	109.7	113.2	121.3	123.9
77.5°	70.4	74.0	90.1	123.1	90.1	85.6	89.2	96.3	96.3
80°	51.7	52.6	64.2	86.5	64.2	61.5	66.0	69.6	69.6
82.5°	33.9	35.7	41.9	55.3	42.8	41.9	43.7	46.4	46.4
85°	19.6	20.5	23.2	30.3	24.1	24.1	25.9	25.9	25.0
87.5°	8.0	8.9	9.8	11.6	10.7	11.6	11.6	9.8	10.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)