

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: P735882

Luminaire Tested: S122DR-S675D840-X4F0-XX-UDD-W-W

Issue Date: 1/24/2024

Test Information

Test Method: LM-79-2019
Report Number: P735882
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-S675D840-X4F0-XX-UDD-W-W
Description: DEFINE 2 DIRECT RECESSED WITH WALL WASH OPTIC
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2989.6 lumens
Efficiency: N/A
Efficacy: 115.0 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

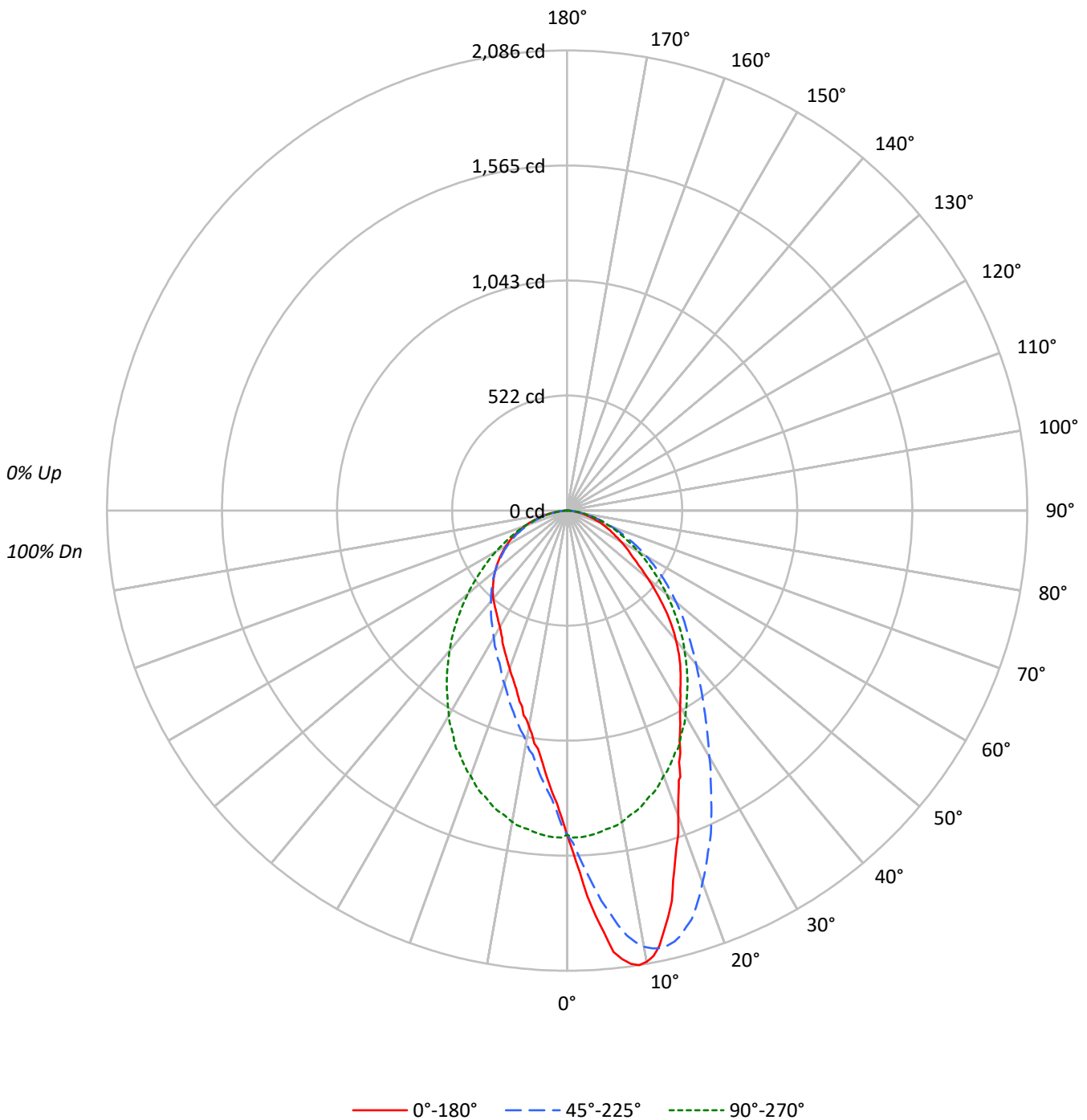
Input Watts (W): 26
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	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	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																												
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°	28244	28244	28244	28244	28244
5°	37042	34235	28390	23812	22720
10°	40544	39184	27969	20814	19395
15°	36473	39689	27210	18789	17201
20°	30097	36706	26172	17041	15595
25°	25721	32748	25251	15764	14458
30°	22750	28600	23804	14771	13539
35°	21043	25330	22322	14077	13152
40°	19258	22856	20778	13479	13075
45°	16965	20863	19216	13067	12901
50°	14285	19237	17607	12715	12745
55°	12014	17701	15904	12285	12520
60°	10833	15996	14443	11917	12267
65°	9829	14054	12862	11343	12034
70°	8851	12145	11577	10498	11408
75°	7724	10278	9900	9528	10427
80°	6486	8047	8047	8269	8722
85°	4896	5800	6021	6462	6241

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 30635 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	144.6	4.8
10°-20°	396.9	13.3
20°-30°	520.5	17.4
30°-40°	550.1	18.4
40°-50°	510.7	17.1
50°-60°	408.8	13.7
60°-70°	279.6	9.4
70°-80°	144.3	4.8
80°-90°	34.3	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°	1061.9	35.5
0°-40°	1612.0	53.9
0°-60°	2531.5	84.7
0°-90°	2989.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2989.6	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1469	1469	1469	1469	1469	
5°	1920	1774	1471	1234	1178	189
15°	1833	1994	1367	944	864	503
25°	1213	1544	1191	743	682	559
35°	897	1080	951	600	560	560
45°	624	768	707	481	475	479
55°	358	528	475	367	374	328
65°	216	309	283	249	265	214
75°	104	138	133	128	140	111
85°	22	26	27	29	28	27
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	1469.4	1469.4	1469.4	1469.4	1469.4	1469.4	1469.4	1469.4	1469.4
1°	1550.1	1542.1	1506.7	1508.7	1482.5	1453.2	1425.9	1408.8	1394.6
2°	1641.0	1624.9	1569.3	1542.1	1482.5	1419.9	1363.3	1348.2	1329.0
3°	1751.1	1712.7	1636.0	1571.3	1480.5	1389.6	1311.8	1284.5	1281.5
4°	1840.0	1805.6	1703.6	1601.6	1475.4	1360.3	1272.4	1243.1	1229.0
5°	1919.8	1897.5	1774.3	1640.0	1471.4	1332.0	1234.1	1193.7	1177.5
6°	2011.7	1966.2	1830.9	1678.4	1464.3	1304.7	1199.7	1151.2	1129.0
7°	2049.0	2020.7	1894.5	1703.6	1455.2	1273.4	1156.3	1103.8	1087.6
8°	2075.3	2064.2	1945.0	1745.0	1451.2	1244.2	1117.9	1085.6	1066.4
9°	2086.4	2077.3	1981.4	1762.2	1444.1	1229.0	1098.7	1045.2	1024.0
10°	2077.3	2081.3	2007.6	1788.5	1433.0	1197.7	1066.4	1020.0	993.7
11°	2056.1	2066.2	2021.7	1818.8	1418.9	1172.5	1037.1	989.7	964.4
12°	2015.7	2037.9	2027.8	1840.0	1405.7	1150.2	1016.9	971.5	949.3
13°	1953.1	2002.6	2023.8	1849.1	1397.7	1125.0	991.7	939.2	910.9
14°	1896.5	1948.0	2012.7	1869.3	1383.5	1096.7	968.5	915.9	891.7
15°	1832.9	1892.5	1994.5	1875.3	1367.4	1073.5	944.2	886.7	864.4
16°	1744.0	1823.8	1961.2	1882.4	1348.2	1047.2	922.0	867.5	838.2
17°	1670.3	1756.2	1935.9	1886.4	1338.1	1027.0	902.8	838.2	819.0
18°	1602.7	1699.6	1890.5	1883.4	1321.9	1003.8	874.5	817.0	798.8
19°	1549.1	1627.9	1845.0	1876.3	1299.7	981.6	853.3	801.8	780.6
20°	1471.4	1562.3	1794.5	1873.3	1279.5	961.4	833.1	780.6	762.4
21°	1406.7	1499.6	1748.1	1863.2	1265.4	942.2	818.0	760.4	744.3
22.5°	1321.9	1403.7	1670.3	1844.0	1234.1	909.9	784.7	741.2	719.0
23°	1311.8	1381.5	1650.1	1838.0	1225.0	902.8	773.6	730.1	712.0
24°	1248.2	1321.9	1602.7	1818.8	1201.7	880.6	755.4	717.0	695.8
25°	1212.8	1273.4	1544.1	1800.6	1190.6	860.4	743.3	699.8	681.7
26°	1163.4	1233.0	1491.6	1774.3	1166.4	842.2	724.1	684.7	667.5
27°	1127.0	1185.6	1437.0	1755.1	1138.1	823.0	708.9	669.5	648.3
28°	1091.7	1148.2	1384.5	1723.8	1117.9	801.8	697.8	656.4	636.2
29°	1055.3	1104.8	1342.1	1699.6	1098.7	783.7	680.6	639.2	620.1
30°	1025.0	1070.5	1288.6	1667.3	1072.5	762.4	665.5	627.1	610.0
32.5°	955.3	993.7	1179.5	1590.5	1009.9	720.0	629.1	593.8	583.7
35°	896.8	922.0	1079.5	1504.7	951.3	674.6	599.9	565.5	560.5
37.5°	835.2	859.4	988.7	1414.8	889.7	633.2	566.5	544.3	540.3
40°	767.5	799.8	910.9	1326.0	828.1	592.8	537.2	520.1	521.1
42.5°	699.8	737.2	835.2	1221.9	770.5	554.4	509.0	496.9	498.9
45°	624.1	671.6	767.5	1127.0	706.9	518.1	480.7	474.6	474.6
47.5°	545.3	605.9	708.9	1029.1	646.3	481.7	453.4	449.4	451.4
50°	477.7	532.2	643.3	934.1	588.8	448.4	425.2	424.1	426.2
52.5°	411.0	465.5	585.7	845.3	530.2	418.1	397.9	397.9	399.9
55°	358.5	400.9	528.2	752.3	474.6	382.7	366.6	369.6	373.6
57.5°	322.1	350.4	471.6	663.5	423.1	348.4	338.3	340.3	345.4
60°	281.8	304.0	416.1	581.7	375.7	315.1	310.0	314.1	319.1
62.5°	245.4	264.6	363.6	508.0	324.2	282.8	280.7	286.8	291.9
65°	216.1	229.2	309.0	433.2	282.8	250.4	249.4	258.5	264.6



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	185.8	195.9	261.6	362.5	241.4	218.1	218.1	228.2	233.3
70°	157.5	165.6	216.1	298.9	206.0	185.8	186.8	198.9	203.0
72.5°	128.3	135.3	175.7	240.3	166.6	155.5	158.5	168.6	172.7
75°	104.0	109.1	138.4	189.9	133.3	124.2	128.3	137.3	140.4
77.5°	79.8	83.8	102.0	139.4	102.0	96.9	101.0	109.1	109.1
80°	58.6	59.6	72.7	98.0	72.7	69.7	74.7	78.8	78.8
82.5°	38.4	40.4	47.5	62.6	48.5	47.5	49.5	52.5	52.5
85°	22.2	23.2	26.3	34.3	27.3	27.3	29.3	29.3	28.3
87.5°	9.1	10.1	11.1	13.1	12.1	13.1	13.1	11.1	12.1
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)