

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: P735883

Luminaire Tested: S122DR-S675D850-X4F0-XX-UDD-W-W

Issue Date: 1/24/2024

Test Information

Test Method: LM-79-2019
Report Number: P735883
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-S675D850-X4F0-XX-UDD-W-W
Description: DEFINE 2 DIRECT RECESSED WITH WALL WASH OPTIC
Light Source: 5000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3283.1 lumens
Efficiency: N/A
Efficacy: 126.3 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

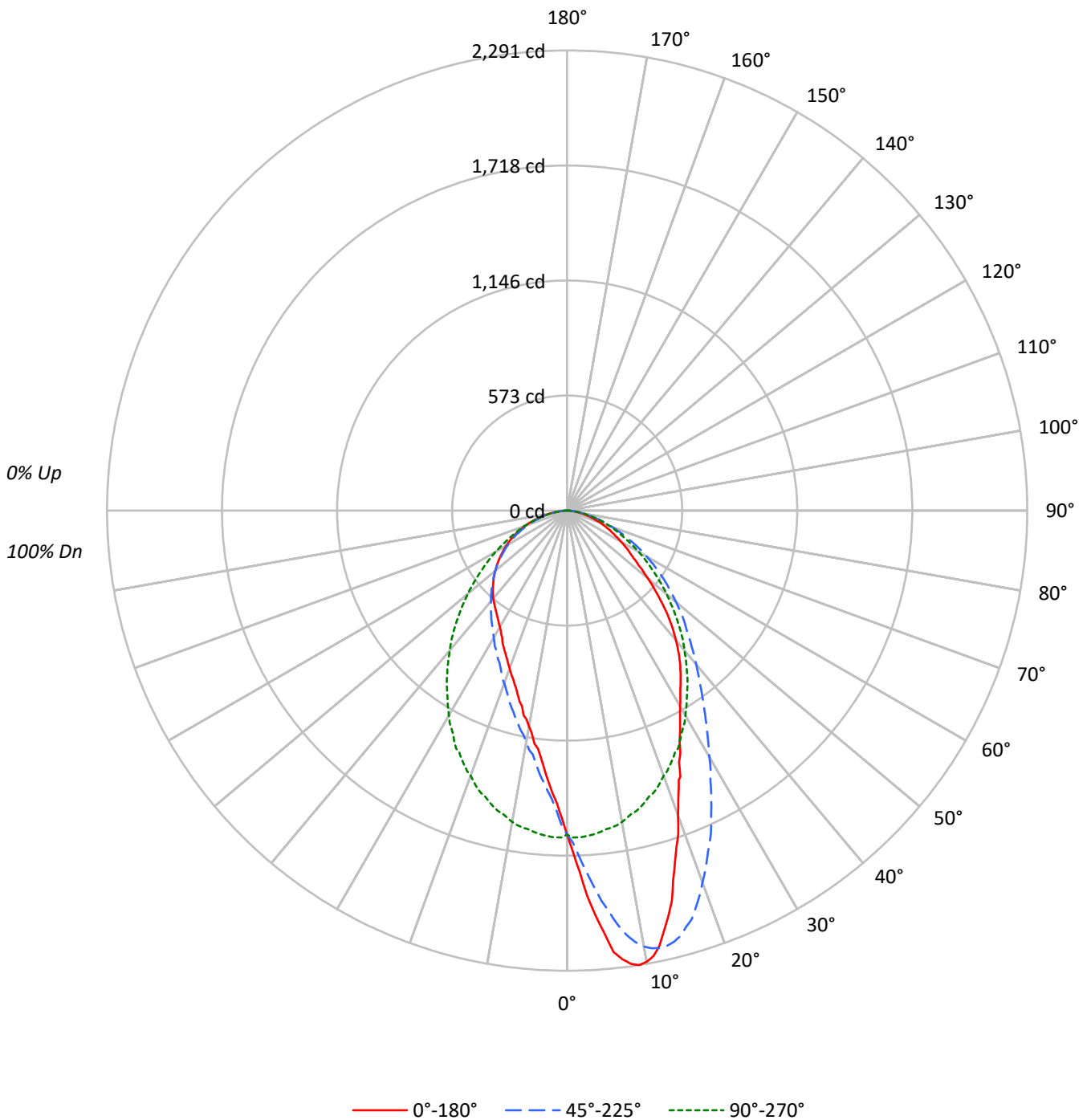
Input Watts (W): 26
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Luminous Intensity Polar Plot



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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20					20					20					20					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°	31015	31015	31015	31015	31015
5°	40677	37596	31176	26148	24950
10°	44524	43031	30715	22857	21300
15°	40053	43586	29881	20634	18890
20°	33051	40310	28741	18714	17127
25°	28247	35963	27730	17310	15877
30°	24982	31408	26141	16220	14866
35°	23108	27818	24514	15456	14443
40°	21147	25099	22818	14804	14357
45°	18631	22910	21102	14350	14168
50°	15687	21123	19332	13962	13995
55°	13193	19437	17466	13492	13750
60°	11894	17564	15858	13090	13470
65°	10793	15436	14122	12457	13217
70°	9722	13336	12712	11532	12527
75°	8481	11281	10872	10457	11452
80°	7117	8833	8833	9088	9575
85°	5381	6352	6594	7101	6859

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 33642 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	158.8	4.8
10°-20°	435.8	13.3
20°-30°	571.5	17.4
30°-40°	604.1	18.4
40°-50°	560.9	17.1
50°-60°	448.9	13.7
60°-70°	307.0	9.4
70°-80°	158.4	4.8
80°-90°	37.6	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°	1166.2	35.5
0°-40°	1770.3	53.9
0°-60°	2780.0	84.7
0°-90°	3283.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3283.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1614	1614	1614	1614	1614	
5°	2108	1948	1616	1355	1293	208
15°	2013	2190	1502	1037	949	552
25°	1332	1696	1308	816	749	614
35°	985	1186	1045	659	616	615
45°	685	843	776	528	521	526
55°	394	580	521	403	410	361
65°	237	339	310	274	291	235
75°	114	152	146	141	154	122
85°	24	29	30	32	31	30
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°	1613.6	1613.6	1613.6	1613.6	1613.6	1613.6	1613.6	1613.6	1613.6
1°	1702.3	1693.4	1654.6	1656.8	1628.0	1595.8	1565.9	1547.1	1531.5
2°	1802.1	1784.4	1723.4	1693.4	1628.0	1559.3	1497.1	1480.5	1459.4
3°	1923.0	1880.9	1796.6	1725.6	1625.8	1526.0	1440.6	1410.6	1407.3
4°	2020.6	1982.9	1870.9	1758.9	1620.2	1493.8	1397.3	1365.2	1349.7
5°	2108.2	2083.8	1948.5	1801.0	1615.8	1462.8	1355.2	1310.8	1293.1
6°	2209.1	2159.2	2010.6	1843.2	1608.0	1432.8	1317.5	1264.3	1239.9
7°	2250.2	2219.1	2080.5	1870.9	1598.1	1398.4	1269.8	1212.1	1194.4
8°	2279.0	2266.8	2135.9	1916.4	1593.6	1366.3	1227.7	1192.2	1171.1
9°	2291.2	2281.2	2175.9	1935.2	1585.9	1349.7	1206.6	1147.8	1124.5
10°	2281.2	2285.6	2204.7	1964.0	1573.7	1315.3	1171.1	1120.1	1091.3
11°	2257.9	2269.0	2220.2	1997.3	1558.1	1287.5	1138.9	1086.8	1059.1
12°	2213.6	2238.0	2226.9	2020.6	1543.7	1263.1	1116.8	1066.9	1042.5
13°	2144.8	2199.1	2222.4	2030.6	1534.9	1235.4	1089.0	1031.4	1000.3
14°	2082.7	2139.3	2210.2	2052.8	1519.3	1204.4	1063.5	1005.9	979.2
15°	2012.8	2078.3	2190.3	2059.4	1501.6	1178.9	1036.9	973.7	949.3
16°	1915.2	2002.9	2153.7	2067.2	1480.5	1150.0	1012.5	952.6	920.5
17°	1834.3	1928.5	2126.0	2071.6	1469.4	1127.9	991.4	920.5	899.4
18°	1760.0	1866.4	2076.0	2068.3	1451.7	1102.3	960.4	897.2	877.2
19°	1701.2	1787.7	2026.1	2060.5	1427.3	1077.9	937.1	880.5	857.3
20°	1615.8	1715.6	1970.7	2057.2	1405.1	1055.8	914.9	857.3	837.3
21°	1544.8	1646.9	1919.7	2046.1	1389.6	1034.7	898.3	835.1	817.3
22.5°	1451.7	1541.5	1834.3	2025.0	1355.2	999.2	861.7	814.0	789.6
23°	1440.6	1517.1	1812.1	2018.4	1345.2	991.4	849.5	801.8	781.8
24°	1370.7	1451.7	1760.0	1997.3	1319.7	967.0	829.5	787.4	764.1
25°	1331.9	1398.4	1695.7	1977.3	1307.5	944.9	816.2	768.5	748.6
26°	1277.6	1354.1	1638.0	1948.5	1280.9	924.9	795.2	751.9	733.0
27°	1237.6	1302.0	1578.1	1927.4	1249.8	903.8	778.5	735.3	712.0
28°	1198.8	1260.9	1520.4	1893.1	1227.7	880.5	766.3	720.8	698.7
29°	1158.9	1213.2	1473.9	1866.4	1206.6	860.6	747.5	702.0	680.9
30°	1125.6	1175.5	1415.1	1831.0	1177.8	837.3	730.8	688.7	669.8
32.5°	1049.1	1091.3	1295.3	1746.7	1109.0	790.7	690.9	652.1	641.0
35°	984.8	1012.5	1185.5	1652.4	1044.7	740.8	658.7	621.0	615.5
37.5°	917.1	943.8	1085.7	1553.7	977.0	695.3	622.1	597.8	593.3
40°	842.8	878.3	1000.3	1456.1	909.4	651.0	590.0	571.1	572.2
42.5°	768.5	809.6	917.1	1341.9	846.2	608.8	558.9	545.6	547.8
45°	685.4	737.5	842.8	1237.6	776.3	568.9	527.9	521.2	521.2
47.5°	598.9	665.4	778.5	1130.1	709.8	529.0	497.9	493.5	495.7
50°	524.6	584.4	706.4	1025.8	646.5	492.4	466.9	465.8	468.0
52.5°	451.4	511.2	643.2	928.2	582.2	459.1	436.9	436.9	439.2
55°	393.7	440.3	580.0	826.2	521.2	420.3	402.6	405.9	410.3
57.5°	353.8	384.8	517.9	728.6	464.7	382.6	371.5	373.7	379.3
60°	309.4	333.8	456.9	638.8	412.5	346.0	340.5	344.9	350.4
62.5°	269.5	290.6	399.2	557.8	356.0	310.5	308.3	315.0	320.5
65°	237.3	251.7	339.4	475.8	310.5	275.0	273.9	283.9	290.6



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	204.1	215.1	287.2	398.1	265.1	239.5	239.5	250.6	256.2
70°	173.0	181.9	237.3	328.3	226.2	204.1	205.2	218.5	222.9
72.5°	140.8	148.6	193.0	263.9	183.0	170.8	174.1	185.2	189.6
75°	114.2	119.8	151.9	208.5	146.4	136.4	140.8	150.8	154.2
77.5°	87.6	92.0	112.0	153.0	112.0	106.5	110.9	119.8	119.8
80°	64.3	65.4	79.8	107.6	79.8	76.5	82.1	86.5	86.5
82.5°	42.1	44.4	52.1	68.8	53.2	52.1	54.3	57.7	57.7
85°	24.4	25.5	28.8	37.7	29.9	29.9	32.2	32.2	31.1
87.5°	10.0	11.1	12.2	14.4	13.3	14.4	14.4	12.2	13.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)