

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: P735861

Luminaire Tested: S122DR-S1005D950-X4F0-XX-UDD-W-W

Issue Date: 1/24/2024

Test Information

Test Method: LM-79-2019
Report Number: P735861
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-S1005D950-X4F0-XX-UDD-W-W
Description: DEFINE 2 DIRECT RECESSED WITH WALL WASH OPTIC
Light Source: 5000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4259.4 lumens
Efficiency: N/A
Efficacy: 101.9 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

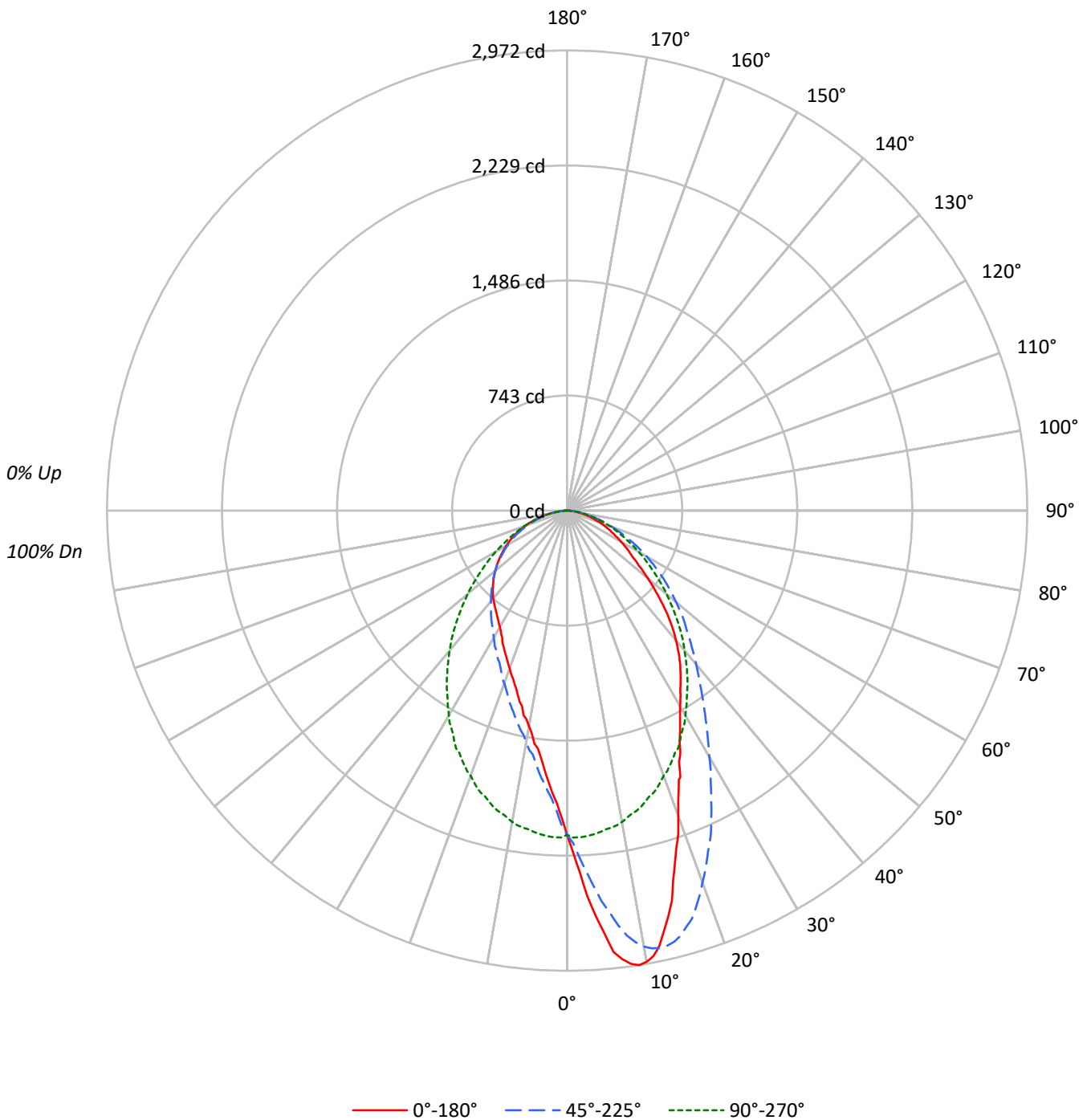
Input Watts (W): 41.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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				
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°	40238	40238	40238	40238	40238
5°	52773	48775	40447	33924	32369
10°	57763	55827	39848	29653	27631
15°	51965	56546	38766	26769	24508
20°	42880	52297	37287	24280	22220
25°	36648	46656	35976	22458	20598
30°	32411	40747	33914	21043	19287
35°	29979	36089	31802	20053	18737
40°	27438	32564	29603	19205	18628
45°	24171	29725	27376	18618	18381
50°	20349	27406	25083	18112	18157
55°	17118	25217	22660	17503	17838
60°	15431	22789	20574	16980	17476
65°	14004	20025	18324	16164	17146
70°	12611	17304	16494	14960	16253
75°	11006	14638	14103	13568	14853
80°	9232	11468	11468	11789	12420
85°	6991	8248	8557	9196	8888

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 43648 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	206.0	4.8
10°-20°	565.4	13.3
20°-30°	741.5	17.4
30°-40°	783.7	18.4
40°-50°	727.7	17.1
50°-60°	582.4	13.7
60°-70°	398.3	9.4
70°-80°	205.5	4.8
80°-90°	48.8	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°	1512.9	35.5
0°-40°	2296.6	53.9
0°-60°	3606.7	84.7
0°-90°	4259.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4259.4	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2093	2093	2093	2093	2093	
5°	2735	2528	2096	1758	1678	269
15°	2611	2842	1948	1345	1232	717
25°	1728	2200	1696	1059	971	796
35°	1278	1538	1355	855	798	797
45°	889	1094	1007	685	676	683
55°	511	752	676	522	532	468
65°	308	440	403	355	377	305
75°	148	197	190	183	200	158
85°	32	37	39	42	40	38
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°	2093.4	2093.4	2093.4	2093.4	2093.4	2093.4	2093.4	2093.4	2093.4
1°	2208.5	2197.0	2146.6	2149.5	2112.1	2070.4	2031.5	2007.1	1986.9
2°	2338.0	2315.0	2235.8	2197.0	2112.1	2022.9	1942.3	1920.7	1893.4
3°	2494.8	2440.1	2330.8	2238.7	2109.2	1979.7	1869.0	1830.1	1825.8
4°	2621.4	2572.5	2427.2	2281.9	2102.0	1938.0	1812.8	1771.1	1751.0
5°	2735.1	2703.4	2527.9	2336.6	2096.3	1897.7	1758.2	1700.6	1677.6
6°	2866.0	2801.3	2608.5	2391.2	2086.2	1858.9	1709.2	1640.2	1608.5
7°	2919.2	2879.0	2699.1	2427.2	2073.3	1814.3	1647.4	1572.6	1549.5
8°	2956.7	2940.8	2771.1	2486.2	2067.5	1772.6	1592.7	1546.7	1519.3
9°	2972.5	2959.5	2822.9	2510.6	2057.4	1751.0	1565.4	1489.1	1458.9
10°	2959.5	2965.3	2860.3	2548.0	2041.6	1706.4	1519.3	1453.2	1415.7
11°	2929.3	2943.7	2880.4	2591.2	2021.5	1670.4	1477.6	1410.0	1374.0
12°	2871.8	2903.4	2889.0	2621.4	2002.8	1638.8	1448.8	1384.1	1352.4
13°	2782.6	2853.1	2883.3	2634.4	1991.2	1602.8	1412.9	1338.0	1297.8
14°	2702.0	2775.4	2867.5	2663.1	1971.1	1562.5	1379.8	1305.0	1270.4
15°	2611.4	2696.2	2841.6	2671.8	1948.1	1529.4	1345.2	1263.2	1231.6
16°	2484.7	2598.4	2794.1	2681.9	1920.7	1492.0	1313.6	1235.9	1194.2
17°	2379.7	2502.0	2758.1	2687.6	1906.4	1463.2	1286.3	1194.2	1166.8
18°	2283.3	2421.4	2693.4	2683.3	1883.3	1430.1	1246.0	1164.0	1138.1
19°	2207.1	2319.3	2628.6	2673.2	1851.7	1398.5	1215.8	1142.4	1112.2
20°	2096.3	2225.8	2556.7	2668.9	1822.9	1369.7	1187.0	1112.2	1086.3
21°	2004.2	2136.6	2490.5	2654.5	1802.8	1342.4	1165.4	1083.4	1060.4
22.5°	1883.3	1999.9	2379.7	2627.2	1758.2	1296.3	1117.9	1056.1	1024.4
23°	1869.0	1968.2	2350.9	2618.5	1745.2	1286.3	1102.1	1040.2	1014.3
24°	1778.3	1883.3	2283.3	2591.2	1712.1	1254.6	1076.2	1021.5	991.3
25°	1728.0	1814.3	2199.9	2565.3	1696.3	1225.8	1058.9	997.1	971.2
26°	1657.5	1756.7	2125.1	2527.9	1661.8	1199.9	1031.6	975.5	951.0
27°	1605.7	1689.1	2047.4	2500.6	1621.5	1172.6	1010.0	953.9	923.7
28°	1555.3	1635.9	1972.5	2456.0	1592.7	1142.4	994.2	935.2	906.4
29°	1503.5	1574.0	1912.1	2421.4	1565.4	1116.5	969.7	910.7	883.4
30°	1460.3	1525.1	1835.9	2375.4	1528.0	1086.3	948.1	893.5	869.0
32.5°	1361.1	1415.7	1680.5	2266.1	1438.8	1025.8	896.3	846.0	831.6
35°	1277.6	1313.6	1538.0	2143.8	1355.3	961.1	854.6	805.7	798.5
37.5°	1189.9	1224.4	1408.5	2015.7	1267.5	902.1	807.1	775.5	769.7
40°	1093.5	1139.5	1297.8	1889.1	1179.8	844.6	765.4	741.0	742.4
42.5°	997.1	1050.3	1189.9	1740.9	1097.8	789.9	725.1	707.9	710.7
45°	889.2	956.8	1093.5	1605.7	1007.1	738.1	684.9	676.2	676.2
47.5°	776.9	863.3	1010.0	1466.1	920.8	686.3	646.0	640.2	643.1
50°	680.5	758.2	916.5	1330.9	838.8	638.8	605.7	604.3	607.2
52.5°	585.6	663.3	834.5	1204.2	755.4	595.6	566.9	566.9	569.7
55°	510.8	571.2	752.5	1071.9	676.2	545.3	522.3	526.6	532.3
57.5°	459.0	499.3	671.9	945.3	602.8	496.4	482.0	484.9	492.1
60°	401.4	433.1	592.8	828.7	535.2	448.9	441.7	447.5	454.6
62.5°	349.6	377.0	518.0	723.7	461.8	402.9	400.0	408.6	415.8
65°	307.9	326.6	440.3	617.2	402.9	356.8	355.4	368.3	377.0



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	264.7	279.1	372.6	516.5	343.9	310.8	310.8	325.2	332.4
70°	224.4	236.0	307.9	425.9	293.5	264.7	266.2	283.4	289.2
72.5°	182.7	192.8	250.3	342.4	237.4	221.6	225.9	240.3	246.0
75°	148.2	155.4	197.1	270.5	189.9	177.0	182.7	195.7	200.0
77.5°	113.7	119.4	145.3	198.5	145.3	138.1	143.9	155.4	155.4
80°	83.4	84.9	103.6	139.6	103.6	99.3	106.5	112.2	112.2
82.5°	54.7	57.6	67.6	89.2	69.1	67.6	70.5	74.8	74.8
85°	31.7	33.1	37.4	48.9	38.8	38.8	41.7	41.7	40.3
87.5°	12.9	14.4	15.8	18.7	17.3	18.7	18.7	15.8	17.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)