

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



Scaled data based on original data using
LM-79-2024 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: S122DRP-S1005D950-X4F0-XX-UDD-W-W

Issue Date: 1/24/2024

Test Information

Test Method: LM-79-2024
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: S122DRP-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

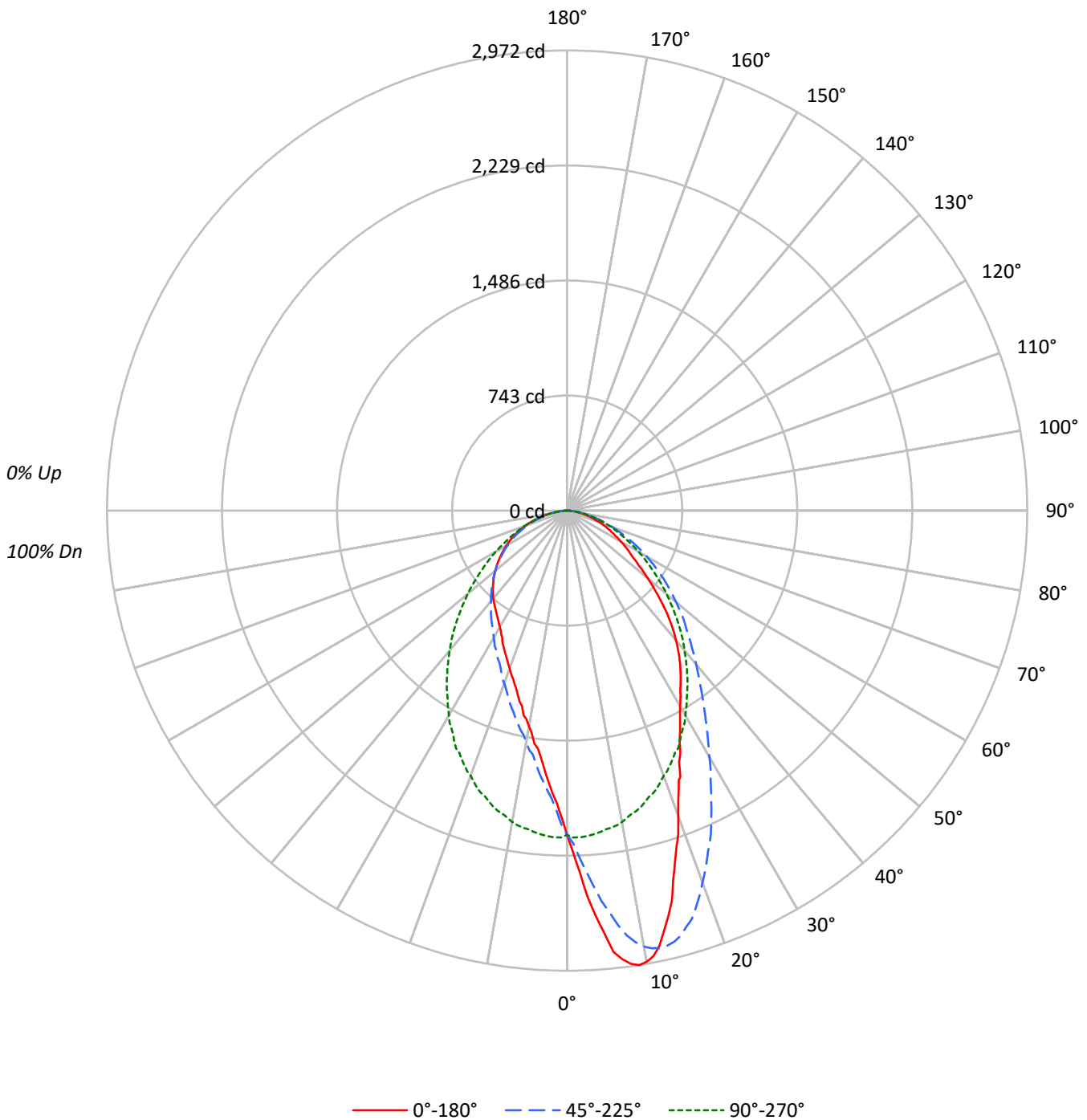
Lumens per Lamp: N/A
Luminaire Lumens: 4259.4 lumens
Efficiency: N/A
Efficacy: 101.9 lumens/watt
Spacing Criteria (0/90/45): 0.9 / 1.11 / 1.12
Luminous Opening: Rectangular (W 4' x L: 0.14' x H: 0')
CIE Type: Direct

Input Watts (W): 41.8
Input Voltage (V): 120
Input Current (A_{in}): 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



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CIE UGR TABLE:

Reflectances:											
Ceiling		0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
Wall		0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
Reference plane		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room dimensions		Viewed crosswise					Viewed endwise				
X=2H	Y=2H	22.06	23.58	22.42	23.89	24.21	21.63	23.15	22.00	23.47	23.78
	3H	23.26	24.62	23.64	24.95	25.31	23.14	24.51	23.52	24.84	25.20
	4H	23.66	24.94	24.06	25.29	25.67	23.67	24.95	24.07	25.30	25.68
	6H	23.91	25.09	24.32	25.46	25.85	24.02	25.21	24.44	25.58	25.97
	8H	23.97	25.10	24.40	25.49	25.89	24.12	25.25	24.55	25.64	26.04
	12H	24.00	25.08	24.43	25.46	25.89	24.17	25.25	24.60	25.64	26.06
4H	2H	23.11	24.40	23.51	24.74	25.12	22.70	23.98	23.10	24.33	24.71
	3H	24.47	25.54	24.89	25.94	26.34	24.33	25.39	24.74	25.79	26.19
	4H	24.94	25.90	25.37	26.31	26.75	24.91	25.87	25.34	26.28	26.72
	6H	25.25	26.08	25.71	26.53	26.99	25.33	26.16	25.79	26.61	27.07
	8H	25.33	26.11	25.79	26.55	27.02	25.45	26.23	25.91	26.67	27.14
	12H	25.38	26.07	25.86	26.55	27.02	25.52	26.22	26.00	26.70	27.17
8H	4H	25.29	26.07	25.76	26.52	26.98	25.25	26.03	25.71	26.47	26.94
	6H	25.69	26.34	26.19	26.83	27.31	25.77	26.41	26.27	26.90	27.38
	8H	25.82	26.39	26.33	26.90	27.39	25.94	26.51	26.45	27.02	27.51
	12H	25.90	26.41	26.41	26.90	27.47	26.06	26.57	26.57	27.06	27.63
12H	4H	25.32	26.01	25.80	26.49	26.96	25.27	25.96	25.75	26.44	26.91
	6H	25.74	26.32	26.25	26.83	27.32	25.81	26.39	26.32	26.90	27.39
	8H	25.91	26.42	26.42	26.91	27.47	26.03	26.54	26.54	27.03	27.60