

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: P735860

Luminaire Tested: S122DRP-S1005D940-X4F0-XX-UDD-W-W

Issue Date: 1/24/2024

Test Information

Test Method: LM-79-2024
Report Number: P735860
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-S1005D940-X4F0-XX-UDD-W-W
Description: DEFINE 2 DIRECT RECESSED WITH WALL WASH OPTIC
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

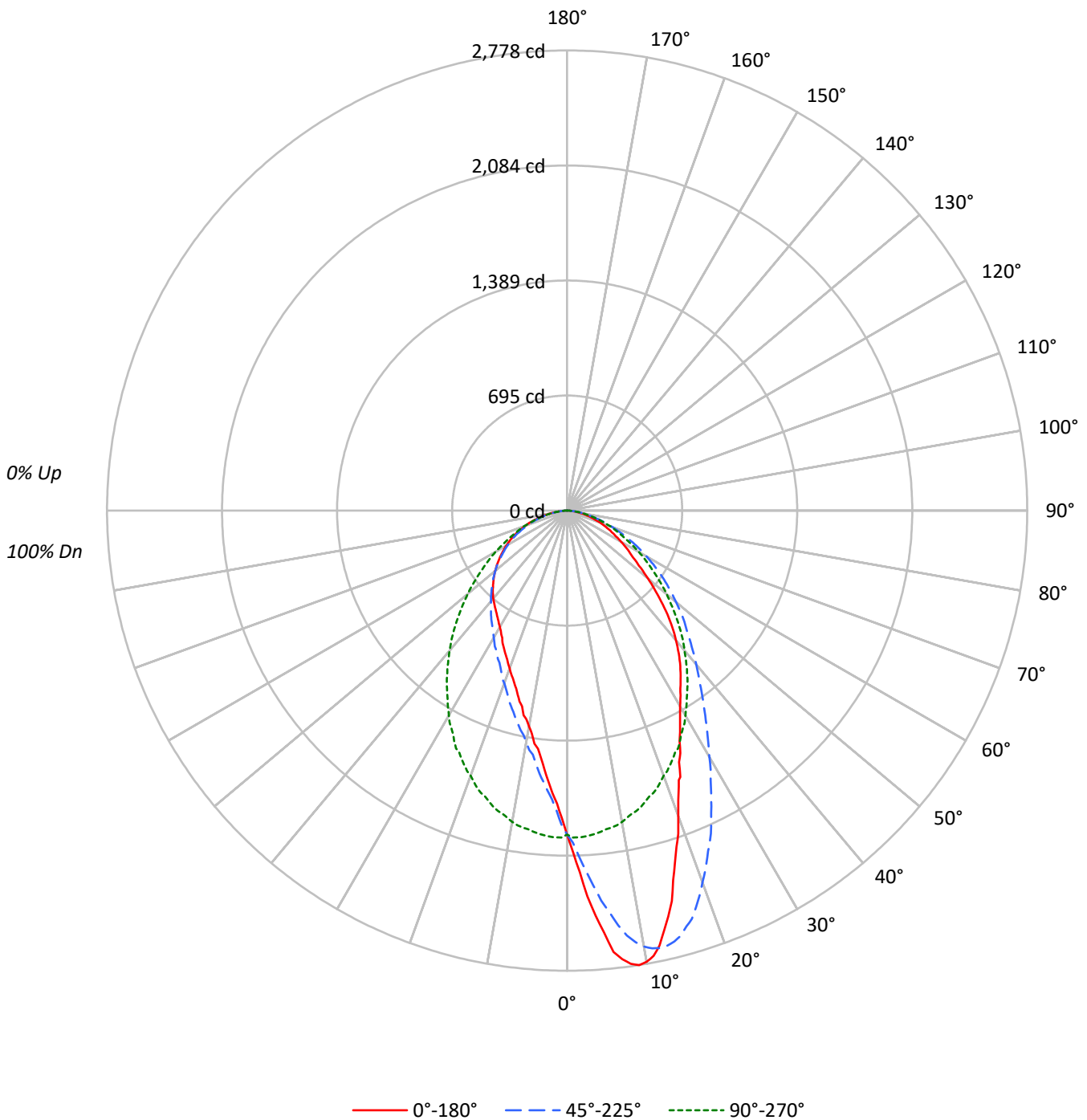
Lumens per Lamp: N/A
Luminaire Lumens: 3981.2 lumens
Efficiency: N/A
Efficacy: 95.2 lumens/watt
Spacing Criteria (0/90/45): 0.9 / 1.11 / 1.12
Luminous Opening: Rectangular (W 4' x L: 0.14' x H: 0')
CIE Type: Direct

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	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°	37610	37610	37610	37610	37610
5°	49327	45591	37806	31709	30256
10°	53992	52181	37246	27717	25828
15°	48572	52853	36235	25021	22908
20°	40079	48881	34853	22695	20768
25°	34254	43609	33626	20992	19253
30°	30296	38086	31699	19669	18029
35°	28022	33733	29725	18744	17514
40°	25646	30436	27671	17951	17411
45°	22592	27784	25590	17400	17182
50°	19021	25618	23444	16931	16970
55°	15998	23568	21182	16360	16675
60°	14424	21301	19233	15873	16338
65°	13090	18716	17124	15109	16023
70°	11791	16174	15415	13982	15191
75°	10286	13680	13182	12685	13880
80°	8634	10715	10715	11014	11611
85°	6528	7719	8006	8601	8314

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 40796 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	192.6	4.8
10°-20°	528.5	13.3
20°-30°	693.1	17.4
30°-40°	732.5	18.4
40°-50°	680.1	17.1
50°-60°	544.4	13.7
60°-70°	372.3	9.4
70°-80°	192.1	4.8
80°-90°	45.6	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°	1414.2	35.5
0°-40°	2146.7	53.9
0°-60°	3371.2	84.7
0°-90°	3981.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3981.2	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1957	1957	1957	1957	1957	
5°	2556	2363	1959	1643	1568	252
15°	2441	2656	1821	1257	1151	670
25°	1615	2056	1586	990	908	744
35°	1194	1438	1267	799	746	745
45°	831	1022	941	640	632	638
55°	477	703	632	488	498	437
65°	288	412	376	332	352	285
75°	138	184	178	171	187	147
85°	30	35	36	39	38	36
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°	1956.7	1956.7	1956.7	1956.7	1956.7	1956.7	1956.7	1956.7	1956.7
1°	2064.3	2053.5	2006.5	2009.2	1974.2	1935.2	1898.9	1876.0	1857.2
2°	2185.3	2163.8	2089.9	2053.5	1974.2	1890.8	1815.5	1795.3	1769.8
3°	2331.9	2280.8	2178.6	2092.5	1971.5	1850.5	1746.9	1710.6	1706.6
4°	2450.3	2404.5	2268.7	2132.9	1964.8	1811.5	1694.5	1655.5	1636.6
5°	2556.5	2526.9	2362.9	2184.0	1959.4	1773.8	1643.4	1589.6	1568.1
6°	2678.9	2618.4	2438.2	2235.1	1950.0	1737.5	1597.6	1533.1	1503.5
7°	2728.6	2691.0	2522.9	2268.7	1937.9	1695.8	1539.8	1469.9	1448.4
8°	2763.6	2748.8	2590.1	2323.9	1932.5	1656.8	1488.7	1445.7	1420.1
9°	2778.4	2766.3	2638.5	2346.7	1923.1	1636.6	1463.2	1391.9	1363.6
10°	2766.3	2771.7	2673.5	2381.7	1908.3	1595.0	1420.1	1358.3	1323.3
11°	2738.1	2751.5	2692.3	2422.0	1889.5	1561.3	1381.1	1317.9	1284.3
12°	2684.3	2713.8	2700.4	2450.3	1872.0	1531.8	1354.2	1293.7	1264.1
13°	2600.9	2666.8	2695.0	2462.4	1861.2	1498.1	1320.6	1250.7	1213.0
14°	2525.6	2594.2	2680.2	2489.3	1842.4	1460.5	1289.7	1219.8	1187.5
15°	2440.9	2520.2	2656.0	2497.3	1820.9	1429.5	1257.4	1180.8	1151.2
16°	2322.5	2428.7	2611.6	2506.7	1795.3	1394.6	1227.8	1155.2	1116.2
17°	2224.3	2338.6	2578.0	2512.1	1781.9	1367.7	1202.3	1116.2	1090.7
18°	2134.2	2263.3	2517.5	2508.1	1760.4	1336.8	1164.6	1088.0	1063.8
19°	2063.0	2167.9	2457.0	2498.7	1730.8	1307.2	1136.4	1067.8	1039.5
20°	1959.4	2080.4	2389.7	2494.6	1703.9	1280.3	1109.5	1039.5	1015.3
21°	1873.3	1997.1	2327.9	2481.2	1685.1	1254.7	1089.3	1012.7	991.1
22.5°	1760.4	1869.3	2224.3	2455.6	1643.4	1211.7	1044.9	987.1	957.5
23°	1746.9	1839.7	2197.4	2447.6	1631.3	1202.3	1030.1	972.3	948.1
24°	1662.2	1760.4	2134.2	2422.0	1600.3	1172.7	1005.9	954.8	926.6
25°	1615.1	1695.8	2056.2	2397.8	1585.5	1145.8	989.8	932.0	907.8
26°	1549.2	1642.0	1986.3	2362.9	1553.3	1121.6	964.2	911.8	888.9
27°	1500.8	1578.8	1913.7	2337.3	1515.6	1096.0	944.1	891.6	863.4
28°	1453.8	1529.1	1843.7	2295.6	1488.7	1067.8	929.3	874.1	847.2
29°	1405.3	1471.2	1787.3	2263.3	1463.2	1043.6	906.4	851.3	825.7
30°	1365.0	1425.5	1716.0	2220.3	1428.2	1015.3	886.2	835.1	812.3
32.5°	1272.2	1323.3	1570.8	2118.1	1344.8	958.9	837.8	790.8	777.3
35°	1194.2	1227.8	1437.6	2003.8	1266.8	898.3	798.8	753.1	746.4
37.5°	1112.2	1144.4	1316.6	1884.1	1184.8	843.2	754.4	724.9	719.5
40°	1022.1	1065.1	1213.0	1765.8	1102.8	789.4	715.4	692.6	693.9
42.5°	932.0	981.7	1112.2	1627.2	1026.1	738.3	677.8	661.7	664.3
45°	831.1	894.3	1022.1	1500.8	941.4	689.9	640.1	632.1	632.1
47.5°	726.2	806.9	944.1	1370.4	860.7	641.5	603.8	598.4	601.1
50°	636.1	708.7	856.7	1244.0	784.0	597.1	566.2	564.8	567.5
52.5°	547.3	620.0	780.0	1125.6	706.0	556.8	529.9	529.9	532.5
55°	477.4	533.9	703.3	1001.9	632.1	509.7	488.2	492.2	497.6
57.5°	429.0	466.7	628.0	883.5	563.5	464.0	450.5	453.2	459.9
60°	375.2	404.8	554.1	774.6	500.3	419.6	412.9	418.2	425.0
62.5°	326.8	352.3	484.1	676.4	431.7	376.5	373.9	381.9	388.7
65°	287.8	305.3	411.5	576.9	376.5	333.5	332.2	344.3	352.3



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	247.4	260.9	348.3	482.8	321.4	290.5	290.5	303.9	310.7
70°	209.8	220.6	287.8	398.1	274.3	247.4	248.8	264.9	270.3
72.5°	170.8	180.2	234.0	320.1	221.9	207.1	211.1	224.6	230.0
75°	138.5	145.2	184.2	252.8	177.5	165.4	170.8	182.9	186.9
77.5°	106.2	111.6	135.8	185.6	135.8	129.1	134.5	145.2	145.2
80°	78.0	79.3	96.8	130.4	96.8	92.8	99.5	104.9	104.9
82.5°	51.1	53.8	63.2	83.4	64.6	63.2	65.9	69.9	69.9
85°	29.6	30.9	35.0	45.7	36.3	36.3	39.0	39.0	37.7
87.5°	12.1	13.4	14.8	17.5	16.1	17.5	17.5	14.8	16.1
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	21.82	23.34	22.19	23.66	23.97	21.40	22.92	21.76	23.23	23.55
	3H	23.02	24.39	23.40	24.72	25.08	22.91	24.28	23.29	24.60	24.97
	4H	23.42	24.70	23.82	25.05	25.43	23.44	24.72	23.84	25.07	25.45
	6H	23.67	24.86	24.08	25.22	25.62	23.79	24.97	24.20	25.34	25.73
	8H	23.74	24.86	24.16	25.25	25.65	23.89	25.01	24.31	25.40	25.80
	12H	23.77	24.85	24.20	25.23	25.66	23.94	25.02	24.37	25.40	25.83
4H	2H	22.88	24.16	23.28	24.51	24.89	22.47	23.75	22.87	24.10	24.48
	3H	24.24	25.31	24.65	25.70	26.11	24.09	25.16	24.50	25.56	25.96
	4H	24.70	25.66	25.13	26.08	26.51	24.67	25.63	25.11	26.05	26.49
	6H	25.01	25.85	25.47	26.29	26.75	25.10	25.93	25.55	26.37	26.83
	8H	25.09	25.87	25.56	26.32	26.78	25.21	25.99	25.68	26.44	26.90
	12H	25.14	25.84	25.62	26.31	26.79	25.29	25.98	25.77	26.46	26.93
8H	4H	25.06	25.84	25.52	26.28	26.75	25.02	25.80	25.48	26.24	26.71
	6H	25.46	26.10	25.96	26.59	27.07	25.54	26.18	26.03	26.67	27.15
	8H	25.58	26.16	26.09	26.67	27.16	25.70	26.28	26.22	26.79	27.28
	12H	25.67	26.18	26.18	26.67	27.23	25.83	26.34	26.34	26.83	27.39
12H	4H	25.08	25.78	25.56	26.25	26.73	25.03	25.73	25.51	26.21	26.68
	6H	25.50	26.08	26.02	26.59	27.08	25.58	26.15	26.09	26.66	27.15
	8H	25.67	26.18	26.18	26.68	27.24	25.79	26.30	26.30	26.80	27.36