

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: P735858

Luminaire Tested: S122DRP-S1005D930-X4F0-XX-UDD-W-W

Issue Date: 1/24/2024

Test Information

Test Method: LM-79-2024
Report Number: P735858
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-S1005D930-X4F0-XX-UDD-W-W
Description: DEFINE 2 DIRECT RECESSED WITH WALL WASH OPTIC
Light Source: 3000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

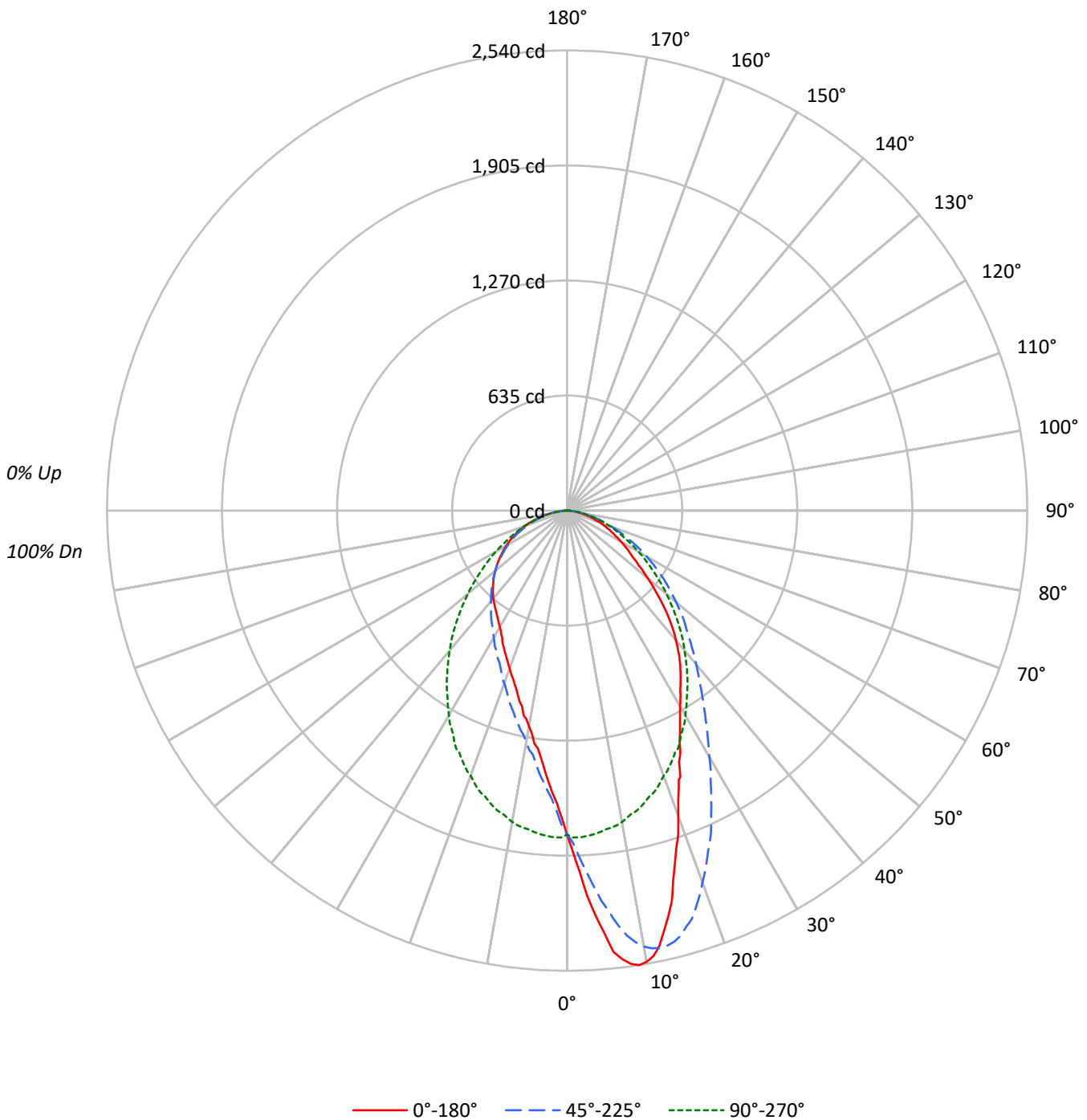
Lumens per Lamp: N/A
Luminaire Lumens: 3640.1 lumens
Efficiency: N/A
Efficacy: 87.1 lumens/watt
Spacing Criteria (0/90/45): 0.9 / 1.11 / 1.12
Luminous Opening: Rectangular (W 4' x L: 0.14' x H: 0')
CIE Type: Direct

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					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°	34387	34387	34387	34387	34387
5°	45099	41684	34566	28990	27663
10°	49364	47709	34055	25342	23615
15°	44409	48324	33130	22878	20944
20°	36645	44694	31867	20749	18988
25°	31318	39872	30746	19194	17603
30°	27699	34821	28982	17984	16484
35°	25621	30842	27179	17139	16012
40°	23448	27829	25300	16412	15921
45°	20656	25403	23396	15910	15709
50°	17392	23420	21434	15481	15517
55°	14628	21551	19366	14956	15244
60°	13190	19475	17584	14512	14935
65°	11966	17115	15659	13813	14654
70°	10779	14786	14095	12785	13887
75°	9402	12514	12053	11600	12692
80°	7892	9796	9796	10073	10615
85°	5977	7057	7322	7873	7587

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 37300 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	176.1	4.8
10°-20°	483.2	13.3
20°-30°	633.7	17.4
30°-40°	669.8	18.4
40°-50°	621.9	17.1
50°-60°	497.7	13.7
60°-70°	340.4	9.4
70°-80°	175.7	4.8
80°-90°	41.7	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°	1293.0	35.5
0°-40°	1962.7	53.9
0°-60°	3082.3	84.7
0°-90°	3640.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3640.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1789	1789	1789	1789	1789	
5°	2337	2160	1792	1502	1434	230
15°	2232	2428	1665	1150	1052	612
25°	1477	1880	1450	905	830	681
35°	1092	1314	1158	730	682	682
45°	760	934	861	585	578	584
55°	436	643	578	446	455	400
65°	263	376	344	304	322	261
75°	127	168	162	156	171	135
85°	27	32	33	36	34	33
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°	1789.0	1789.0	1789.0	1789.0	1789.0	1789.0	1789.0	1789.0	1789.0
1°	1887.4	1877.6	1834.5	1837.0	1805.0	1769.4	1736.2	1715.3	1698.1
2°	1998.1	1978.4	1910.8	1877.6	1805.0	1728.8	1659.9	1641.5	1618.1
3°	2132.1	2085.4	1991.9	1913.2	1802.6	1691.9	1597.2	1564.0	1560.3
4°	2240.3	2198.5	2074.3	1950.1	1796.4	1656.2	1549.3	1513.6	1496.4
5°	2337.4	2310.4	2160.4	1996.8	1791.5	1621.8	1502.5	1453.4	1433.7
6°	2449.3	2394.0	2229.2	2043.6	1782.9	1588.6	1460.7	1401.7	1374.7
7°	2494.8	2460.4	2306.7	2074.3	1771.8	1550.5	1407.9	1343.9	1324.3
8°	2526.8	2513.3	2368.2	2124.7	1766.9	1514.8	1361.1	1321.8	1298.4
9°	2540.3	2529.2	2412.4	2145.6	1758.3	1496.4	1337.8	1272.6	1246.8
10°	2529.2	2534.2	2444.4	2177.6	1744.8	1458.3	1298.4	1241.9	1209.9
11°	2503.4	2515.7	2461.6	2214.5	1727.6	1427.5	1262.8	1205.0	1174.3
12°	2454.2	2481.3	2469.0	2240.3	1711.6	1400.5	1238.2	1182.9	1155.8
13°	2378.0	2438.3	2464.1	2251.4	1701.7	1369.8	1207.4	1143.5	1109.1
14°	2309.2	2371.9	2450.6	2276.0	1684.5	1335.3	1179.2	1115.2	1085.7
15°	2231.7	2304.2	2428.4	2283.3	1664.9	1307.0	1149.7	1079.6	1052.5
16°	2123.5	2220.6	2387.8	2291.9	1641.5	1275.1	1122.6	1056.2	1020.6
17°	2033.7	2138.2	2357.1	2296.9	1629.2	1250.5	1099.2	1020.6	997.2
18°	1951.3	2069.4	2301.8	2293.2	1609.5	1222.2	1064.8	994.7	972.6
19°	1886.2	1982.1	2246.4	2284.6	1582.5	1195.2	1039.0	976.3	950.5
20°	1791.5	1902.2	2185.0	2280.9	1557.9	1170.6	1014.4	950.5	928.3
21°	1712.8	1825.9	2128.4	2268.6	1540.7	1147.2	996.0	925.9	906.2
22.5°	1609.5	1709.1	2033.7	2245.2	1502.5	1107.9	955.4	902.5	875.5
23°	1597.2	1682.1	2009.1	2237.8	1491.5	1099.2	941.9	889.0	866.9
24°	1519.8	1609.5	1951.3	2214.5	1463.2	1072.2	919.7	873.0	847.2
25°	1476.7	1550.5	1880.0	2192.3	1449.7	1047.6	905.0	852.1	830.0
26°	1416.5	1501.3	1816.1	2160.4	1420.2	1025.5	881.6	833.7	812.8
27°	1372.2	1443.5	1749.7	2137.0	1385.7	1002.1	863.2	815.2	789.4
28°	1329.2	1398.0	1685.8	2098.9	1361.1	976.3	849.6	799.2	774.6
29°	1284.9	1345.2	1634.1	2069.4	1337.8	954.2	828.7	778.3	755.0
30°	1248.0	1303.4	1568.9	2030.0	1305.8	928.3	810.3	763.6	742.7
32.5°	1163.2	1209.9	1436.2	1936.6	1229.6	876.7	766.0	723.0	710.7
35°	1091.9	1122.6	1314.4	1832.1	1158.3	821.4	730.4	688.6	682.4
37.5°	1016.9	1046.4	1203.8	1722.6	1083.3	770.9	689.8	662.7	657.8
40°	934.5	973.8	1109.1	1614.4	1008.3	721.8	654.1	633.2	634.5
42.5°	852.1	897.6	1016.9	1487.8	938.2	675.0	619.7	605.0	607.4
45°	759.9	817.7	934.5	1372.2	860.7	630.8	585.3	577.9	577.9
47.5°	664.0	737.7	863.2	1252.9	786.9	586.5	552.1	547.2	549.6
50°	581.6	648.0	783.2	1137.4	716.8	545.9	517.7	516.4	518.9
52.5°	500.4	566.8	713.2	1029.2	645.5	509.0	484.5	484.5	486.9
55°	436.5	488.1	643.1	916.0	577.9	466.0	446.3	450.0	454.9
57.5°	392.2	426.7	574.2	807.8	515.2	424.2	411.9	414.4	420.5
60°	343.1	370.1	506.6	708.2	457.4	383.6	377.5	382.4	388.5
62.5°	298.8	322.2	442.6	618.5	394.7	344.3	341.8	349.2	355.3
65°	263.1	279.1	376.3	527.5	344.3	304.9	303.7	314.8	322.2



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	226.2	238.5	318.5	441.4	293.9	265.6	265.6	277.9	284.0
70°	191.8	201.7	263.1	364.0	250.8	226.2	227.5	242.2	247.1
72.5°	156.2	164.8	213.9	292.6	202.9	189.4	193.0	205.3	210.3
75°	126.6	132.8	168.5	231.2	162.3	151.2	156.2	167.2	170.9
77.5°	97.1	102.1	124.2	169.7	124.2	118.0	123.0	132.8	132.8
80°	71.3	72.5	88.5	119.3	88.5	84.8	91.0	95.9	95.9
82.5°	46.7	49.2	57.8	76.2	59.0	57.8	60.2	63.9	63.9
85°	27.1	28.3	32.0	41.8	33.2	33.2	35.7	35.7	34.4
87.5°	11.1	12.3	13.5	16.0	14.8	16.0	16.0	13.5	14.8
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	21.51	23.03	21.88	23.35	23.66	21.09	22.61	21.45	22.92	23.24
	3H	22.71	24.08	23.09	24.41	24.77	22.60	23.97	22.98	24.29	24.65
	4H	23.11	24.39	23.51	24.74	25.12	23.13	24.41	23.53	24.76	25.14
	6H	23.36	24.55	23.77	24.91	25.30	23.48	24.66	23.89	25.03	25.42
	8H	23.42	24.55	23.85	24.94	25.34	23.57	24.70	24.00	25.09	25.49
	12H	23.46	24.53	23.89	24.92	25.35	23.63	24.71	24.06	25.09	25.52
4H	2H	22.57	23.85	22.97	24.20	24.58	22.16	23.44	22.56	23.79	24.17
	3H	23.93	24.99	24.34	25.39	25.79	23.78	24.85	24.19	25.25	25.65
	4H	24.39	25.35	24.82	25.76	26.20	24.36	25.32	24.80	25.74	26.18
	6H	24.70	25.54	25.16	25.98	26.44	24.78	25.62	25.24	26.06	26.52
	8H	24.78	25.56	25.24	26.00	26.47	24.90	25.68	25.36	26.12	26.59
	12H	24.83	25.53	25.31	26.00	26.48	24.98	25.67	25.46	26.15	26.62
8H	4H	24.75	25.53	25.21	25.97	26.44	24.70	25.48	25.17	25.93	26.40
	6H	25.15	25.79	25.65	26.28	26.76	25.22	25.87	25.72	26.36	26.84
	8H	25.27	25.85	25.78	26.36	26.84	25.39	25.97	25.90	26.48	26.97
	12H	25.36	25.87	25.87	26.36	26.92	25.51	26.02	26.02	26.52	27.08
12H	4H	24.77	25.47	25.25	25.94	26.41	24.72	25.42	25.20	25.90	26.37
	6H	25.19	25.77	25.71	26.28	26.77	25.27	25.84	25.78	26.35	26.84
	8H	25.36	25.87	25.87	26.36	26.93	25.48	25.99	25.99	26.48	27.05