

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: P735859

Luminaire Tested: S122DRP-S1005D935-X4F0-XX-UDD-W-W

Issue Date: 1/24/2024

Test Information

Test Method: LM-79-2024
Report Number: P735859
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-S1005D935-X4F0-XX-UDD-W-W
Description: DEFINE 2 DIRECT RECESSED WITH WALL WASH OPTIC
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

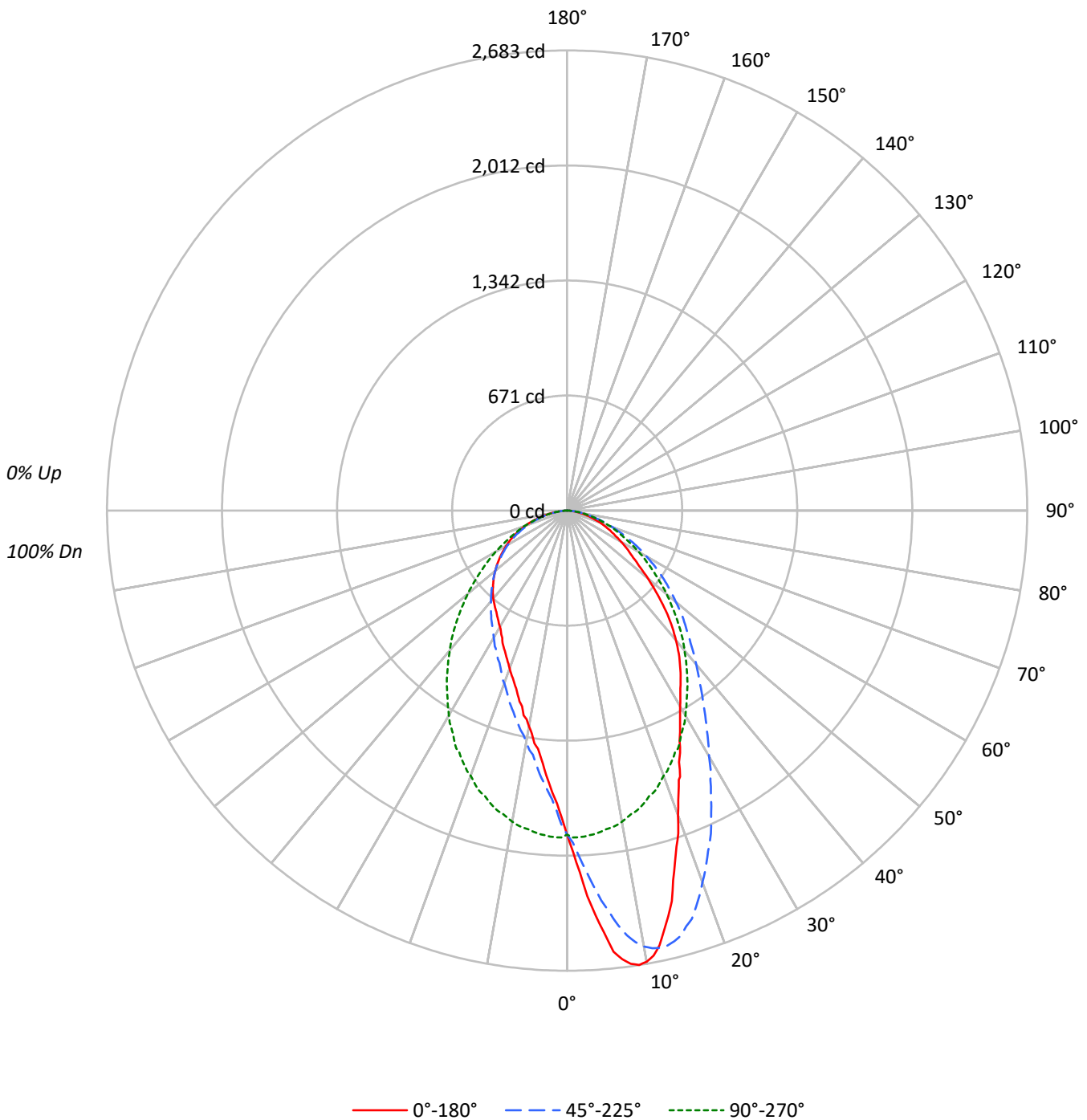
Lumens per Lamp: N/A
Luminaire Lumens: 3844.1 lumens
Efficiency: N/A
Efficacy: 92.0 lumens/watt
Spacing Criteria (0/90/45): 0.9 / 1.11 / 1.12
Luminous Opening: Rectangular (W 4' x L: 0.14' x H: 0')
CIE Type: Direct

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°	36315	36315	36315	36315	36315
5°	47629	44021	36504	30617	29214
10°	52132	50383	35963	26763	24938
15°	46899	51032	34987	24160	22118
20°	38699	47198	33652	21913	20054
25°	33074	42107	32468	20269	18589
30°	29253	36775	30607	18992	17407
35°	27057	32572	28702	18098	16911
40°	24763	29387	26718	17333	16811
45°	21814	26827	24709	16802	16590
50°	18366	24733	22637	16348	16387
55°	15449	22758	20452	15797	16099
60°	13928	20567	18568	15323	15773
65°	12639	18070	16537	14586	15473
70°	11386	15618	14887	13499	14668
75°	9929	13212	12729	12246	13405
80°	8335	10350	10350	10637	11213
85°	6307	7454	7741	8314	8028

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 39391 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	185.9	4.8
10°-20°	510.3	13.3
20°-30°	669.2	17.4
30°-40°	707.3	18.4
40°-50°	656.7	17.1
50°-60°	525.6	13.7
60°-70°	359.5	9.4
70°-80°	185.5	4.8
80°-90°	44.1	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°	1365.4	35.5
0°-40°	2072.8	53.9
0°-60°	3255.1	84.7
0°-90°	3844.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3844.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1889	1889	1889	1889	1889	
5°	2468	2282	1892	1587	1514	243
15°	2357	2564	1758	1214	1112	647
25°	1560	1985	1531	956	876	719
35°	1153	1388	1223	771	721	720
45°	802	987	909	618	610	616
55°	461	679	610	471	480	422
65°	278	397	364	321	340	276
75°	134	178	171	165	180	142
85°	29	34	35	38	36	35
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°	1889.3	1889.3	1889.3	1889.3	1889.3	1889.3	1889.3	1889.3	1889.3
1°	1993.2	1982.8	1937.4	1940.0	1906.2	1868.5	1833.5	1811.4	1793.2
2°	2110.1	2089.3	2017.9	1982.8	1906.2	1825.7	1753.0	1733.5	1708.8
3°	2251.6	2202.3	2103.6	2020.5	1903.6	1786.7	1686.8	1651.7	1647.8
4°	2365.9	2321.7	2190.6	2059.4	1897.1	1749.1	1636.1	1598.5	1580.3
5°	2468.5	2439.9	2281.5	2108.8	1891.9	1712.7	1586.8	1534.8	1514.1
6°	2586.6	2528.2	2354.2	2158.1	1882.8	1677.7	1542.6	1480.3	1451.7
7°	2634.7	2598.3	2436.0	2190.6	1871.1	1637.4	1486.8	1419.3	1398.5
8°	2668.4	2654.1	2500.9	2243.8	1865.9	1599.8	1437.4	1395.9	1371.2
9°	2682.7	2671.0	2547.7	2265.9	1856.9	1580.3	1412.8	1344.0	1316.7
10°	2671.0	2676.2	2581.4	2299.6	1842.6	1540.0	1371.2	1311.5	1277.7
11°	2643.8	2656.7	2599.6	2338.6	1824.4	1507.6	1333.6	1272.5	1240.1
12°	2591.8	2620.4	2607.4	2365.9	1807.5	1479.0	1307.6	1249.2	1220.6
13°	2511.3	2574.9	2602.2	2377.6	1797.1	1446.5	1275.1	1207.6	1171.2
14°	2438.6	2504.8	2587.9	2403.5	1778.9	1410.2	1245.3	1177.7	1146.6
15°	2356.8	2433.4	2564.5	2411.3	1758.2	1380.3	1214.1	1140.1	1111.5
16°	2242.5	2345.1	2521.7	2420.4	1733.5	1346.5	1185.5	1115.4	1077.8
17°	2147.7	2258.1	2489.2	2425.6	1720.5	1320.6	1160.9	1077.8	1053.1
18°	2060.7	2185.4	2430.8	2421.7	1699.7	1290.7	1124.5	1050.5	1027.1
19°	1991.9	2093.2	2372.4	2412.6	1671.2	1262.1	1097.2	1031.0	1003.7
20°	1891.9	2008.8	2307.4	2408.7	1645.2	1236.2	1071.3	1003.7	980.4
21°	1808.8	1928.3	2247.7	2395.7	1627.0	1211.5	1051.8	977.8	957.0
22.5°	1699.7	1804.9	2147.7	2371.1	1586.8	1170.0	1008.9	953.1	924.5
23°	1686.8	1776.4	2121.8	2363.3	1575.1	1160.9	994.7	938.8	915.4
24°	1604.9	1699.7	2060.7	2338.6	1545.2	1132.3	971.3	921.9	894.7
25°	1559.5	1637.4	1985.4	2315.2	1530.9	1106.3	955.7	899.9	876.5
26°	1495.9	1585.5	1917.9	2281.5	1499.8	1083.0	931.0	880.4	858.3
27°	1449.1	1524.4	1847.8	2256.8	1463.4	1058.3	911.5	860.9	833.6
28°	1403.7	1476.4	1780.2	2216.5	1437.4	1031.0	897.3	844.0	818.1
29°	1356.9	1420.6	1725.7	2185.4	1412.8	1007.6	875.2	822.0	797.3
30°	1318.0	1376.4	1656.9	2143.8	1379.0	980.4	855.7	806.4	784.3
32.5°	1228.4	1277.7	1516.7	2045.1	1298.5	925.8	809.0	763.5	750.5
35°	1153.1	1185.5	1388.1	1934.8	1223.2	867.4	771.3	727.2	720.7
37.5°	1073.9	1105.0	1271.2	1819.2	1144.0	814.2	728.5	699.9	694.7
40°	986.9	1028.4	1171.2	1704.9	1064.8	762.2	690.8	668.7	670.0
42.5°	899.9	947.9	1073.9	1571.2	990.8	712.9	654.4	638.9	641.5
45°	802.5	863.5	986.9	1449.1	909.0	666.1	618.1	610.3	610.3
47.5°	701.2	779.1	911.5	1323.2	831.0	619.4	583.0	577.8	580.4
50°	614.2	684.3	827.1	1201.1	757.0	576.5	546.7	545.4	548.0
52.5°	528.5	598.6	753.1	1086.8	681.7	537.6	511.6	511.6	514.2
55°	461.0	515.5	679.1	967.4	610.3	492.1	471.4	475.3	480.4
57.5°	414.2	450.6	606.4	853.1	544.1	448.0	435.0	437.6	444.1
60°	362.3	390.8	535.0	747.9	483.0	405.1	398.6	403.8	410.3
62.5°	315.5	340.2	467.5	653.1	416.8	363.6	361.0	368.8	375.3
65°	277.9	294.8	397.3	557.1	363.6	322.0	320.7	332.4	340.2



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	238.9	251.9	336.3	466.2	310.3	280.5	280.5	293.5	300.0
70°	202.6	213.0	277.9	384.4	264.9	238.9	240.2	255.8	261.0
72.5°	164.9	174.0	225.9	309.0	214.3	200.0	203.9	216.8	222.0
75°	133.7	140.2	177.9	244.1	171.4	159.7	164.9	176.6	180.5
77.5°	102.6	107.8	131.1	179.2	131.1	124.7	129.9	140.2	140.2
80°	75.3	76.6	93.5	126.0	93.5	89.6	96.1	101.3	101.3
82.5°	49.3	51.9	61.0	80.5	62.3	61.0	63.6	67.5	67.5
85°	28.6	29.9	33.8	44.1	35.1	35.1	37.7	37.7	36.4
87.5°	11.7	13.0	14.3	16.9	15.6	16.9	16.9	14.3	15.6
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	21.70	23.22	22.06	23.54	23.85	21.28	22.80	21.64	23.11	23.43
	3H	22.90	24.27	23.28	24.60	24.96	22.79	24.15	23.17	24.48	24.84
	4H	23.30	24.58	23.70	24.93	25.31	23.32	24.60	23.72	24.95	25.32
	6H	23.55	24.74	23.96	25.10	25.49	23.67	24.85	24.08	25.22	25.61
	8H	23.61	24.74	24.04	25.13	25.53	23.76	24.89	24.19	25.28	25.68
	12H	23.64	24.72	24.07	25.11	25.54	23.82	24.90	24.25	25.28	25.71
4H	2H	22.76	24.04	23.16	24.39	24.77	22.35	23.63	22.75	23.98	24.36
	3H	24.12	25.18	24.53	25.58	25.98	23.97	25.04	24.38	25.44	25.84
	4H	24.58	25.54	25.01	25.95	26.39	24.55	25.51	24.99	25.93	26.37
	6H	24.89	25.73	25.35	26.17	26.63	24.97	25.81	25.43	26.25	26.71
	8H	24.97	25.75	25.43	26.19	26.66	25.09	25.87	25.55	26.31	26.78
	12H	25.02	25.72	25.50	26.19	26.66	25.17	25.86	25.65	26.34	26.81
8H	4H	24.94	25.72	25.40	26.16	26.63	24.89	25.67	25.36	26.12	26.58
	6H	25.34	25.98	25.83	26.47	26.95	25.41	26.06	25.91	26.55	27.03
	8H	25.46	26.04	25.97	26.55	27.03	25.58	26.16	26.09	26.67	27.16
	12H	25.55	26.06	26.06	26.55	27.11	25.70	26.21	26.21	26.71	27.27
12H	4H	24.96	25.65	25.44	26.13	26.60	24.91	25.61	25.39	26.09	26.56
	6H	25.38	25.96	25.90	26.47	26.96	25.45	26.03	25.97	26.54	27.03
	8H	25.55	26.06	26.06	26.55	27.12	25.67	26.18	26.18	26.67	27.24