

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: P735902

Luminaire Tested: S122RDRP-S1005D927-X4F0-XX-UDD-W-W

Issue Date: 1/24/2024

Test Information

Test Method: LM-79-2024
Report Number: P735902
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2308-143-2)
Test Lab: INNOVATION CENTER
Issue Date: 1/24/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S122RDRP-S1005D927-X4F0-XX-UDD-W-W
Description: DEFINE 2 REGRESSED DIRECT RECESSED WITH WALL WASH OPTIC
Light Source: 2700K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

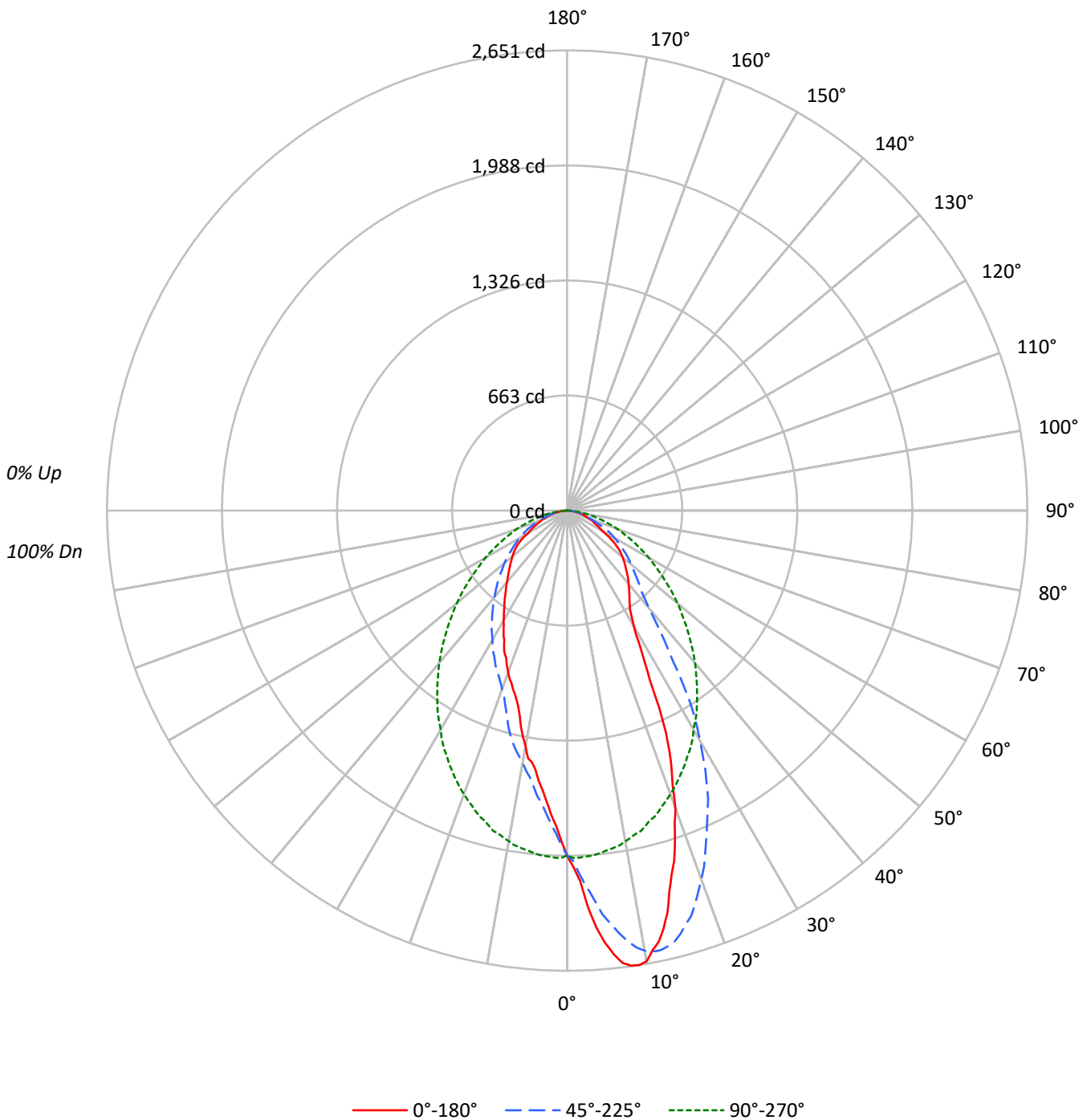
Lumens per Lamp: N/A
Luminaire Lumens: 3404.3 lumens
Efficiency: N/A
Efficacy: 81.4 lumens/watt
Spacing Criteria (0/90/45): 0.82 / 1.11 / 1
Luminous Opening: Rectangular (W 4' x L: 0.14' x H: 0')
CIE Type: Direct

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	103	99	108	104	101	98	100	97	95	96	94	92	92	91	89					87				
2	102	95	89	84	99	93	87	83	89	85	81	86	82	79	83	80	77					75				
3	94	85	78	72	92	83	77	71	80	75	70	78	73	69	75	71	68					66				
4	87	77	69	63	85	75	68	62	73	67	62	71	65	61	69	64	60					58				
5	81	69	61	55	79	68	61	55	66	60	55	64	59	54	63	58	54					52				
6	75	63	55	50	74	63	55	49	61	54	49	59	53	49	58	52	48					46				
7	71	58	50	45	69	57	50	45	56	49	44	55	49	44	53	48	44					42				
8	66	54	46	41	65	53	46	41	52	45	40	51	45	40	50	44	40					38				
9	62	50	42	37	61	49	42	37	48	42	37	47	41	37	46	41	37					35				
10	59	46	39	34	57	46	39	34	45	39	34	44	38	34	43	38	34					32				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	38189	38189	38189	38189	38189
5°	48179	45067	38335	32571	31190
10°	51463	50251	37753	28822	26933
15°	45265	50234	36754	25843	22442
20°	37316	46236	35581	22435	20308
25°	26606	40591	34156	20778	18269
30°	17023	34047	32325	19065	16229
35°	14661	25091	30640	17690	14717
40°	13820	18347	28747	16367	13519
45°	13056	15717	26729	15165	12762
50°	12434	14327	24828	14111	12290
55°	11411	13254	22701	12972	11850
60°	9003	12079	20851	12171	10010
65°	8150	10811	18911	11302	9128
70°	7519	8728	17186	9734	8391
75°	7011	7894	14994	8696	7894
80°	6475	7140	12696	7804	7140
85°	5800	6329	9748	6859	6329

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 37412 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	192.7	5.7
10°-20°	517.8	15.2
20°-30°	649.5	19.1
30°-40°	618.8	18.2
40°-50°	545.9	16.0
50°-60°	429.4	12.6
60°-70°	274.0	8.0
70°-80°	139.3	4.1
80°-90°	36.9	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°	1359.9	39.9
0°-40°	1978.7	58.1
0°-60°	2954.1	86.8
0°-90°	3404.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3404.3	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1987	1987	1987	1987	1987	
5°	2497	2336	1987	1688	1616	243
15°	2275	2524	1847	1299	1128	630
25°	1254	1914	1610	980	861	565
35°	625	1069	1306	754	627	397
45°	480	578	983	558	470	372
55°	340	396	677	387	354	299
65°	179	238	416	248	201	179
75°	94	106	202	117	106	100
85°	26	29	44	31	29	30
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°	1986.8	1986.8	1986.8	1986.8	1986.8	1986.8	1986.8	1986.8	1986.8
1°	2053.7	2063.3	2019.1	2023.9	2002.4	1964.1	1927.1	1930.7	1904.4
2°	2136.2	2161.2	2100.3	2063.3	2001.2	1934.3	1860.2	1850.6	1818.4
3°	2285.5	2273.6	2173.2	2097.9	1996.4	1896.0	1802.8	1781.3	1753.8
4°	2406.2	2370.3	2247.3	2142.1	1994.0	1851.8	1746.7	1709.6	1682.2
5°	2497.0	2451.6	2335.7	2175.6	1986.8	1826.7	1688.1	1646.3	1616.5
6°	2569.8	2535.2	2393.0	2206.6	1977.3	1789.7	1653.5	1597.3	1566.3
7°	2626.0	2597.3	2451.6	2248.5	1968.9	1752.7	1598.5	1540.0	1503.0
8°	2647.5	2634.4	2505.3	2278.3	1959.3	1726.4	1549.6	1497.0	1463.5
9°	2651.1	2652.3	2548.3	2307.0	1951.0	1678.6	1514.9	1461.1	1443.2
10°	2636.7	2647.5	2574.6	2339.3	1934.3	1654.7	1476.7	1425.3	1379.9
11°	2580.6	2628.4	2587.8	2360.8	1919.9	1616.5	1443.2	1376.3	1330.9
12°	2538.8	2584.2	2589.0	2388.2	1903.2	1598.5	1414.5	1324.9	1277.2
13°	2469.5	2517.3	2577.0	2395.4	1893.6	1554.3	1378.7	1272.4	1213.8
14°	2387.0	2463.5	2557.9	2410.9	1869.7	1516.1	1342.9	1198.3	1163.7
15°	2274.7	2383.5	2524.4	2416.9	1847.0	1489.8	1298.7	1161.3	1127.8
16°	2181.6	2304.6	2479.0	2416.9	1832.7	1454.0	1250.9	1129.0	1095.6
17°	2111.1	2211.4	2442.0	2418.1	1808.8	1428.9	1203.1	1099.1	1072.9
18°	2011.9	2124.2	2383.5	2413.3	1783.7	1399.0	1162.5	1074.1	1041.8
19°	1902.0	2035.8	2321.3	2405.0	1762.2	1368.0	1119.5	1047.8	1020.3
20°	1824.3	1947.4	2260.4	2391.8	1739.5	1347.6	1096.8	1017.9	992.8
21°	1694.1	1844.6	2199.5	2373.9	1715.6	1313.0	1065.7	991.6	964.1
22.5°	1561.5	1700.1	2087.2	2344.0	1676.2	1270.0	1031.0	959.4	918.7
23°	1510.1	1665.4	2052.5	2335.7	1663.0	1259.2	1020.3	945.0	909.2
24°	1400.2	1561.5	1980.8	2309.4	1634.4	1223.4	1000.0	916.3	891.3
25°	1254.5	1473.1	1913.9	2281.9	1610.5	1197.1	979.7	893.7	861.4
26°	1089.6	1352.4	1853.0	2248.5	1577.0	1161.3	952.2	872.1	826.7
27°	988.0	1248.5	1770.6	2212.6	1553.1	1135.0	929.5	839.9	807.6
28°	906.8	1084.8	1696.5	2178.0	1524.5	1102.7	914.0	817.2	779.0
29°	818.4	995.2	1609.3	2131.4	1493.4	1065.7	888.9	794.5	753.9
30°	767.0	899.6	1534.0	2096.7	1456.4	1040.6	859.0	771.8	731.2
32.5°	673.8	741.9	1329.7	1997.6	1385.9	968.9	810.0	709.7	675.0
35°	624.8	660.7	1069.3	1881.7	1305.8	909.2	753.9	658.3	627.2
37.5°	587.8	609.3	882.9	1757.4	1224.6	856.6	702.5	610.5	580.6
40°	550.8	567.5	731.2	1638.0	1145.7	805.2	652.3	561.5	538.8
42.5°	517.3	530.5	634.4	1519.7	1064.5	752.7	603.3	523.3	503.0
45°	480.3	492.2	578.2	1376.3	983.3	698.9	557.9	481.5	469.5
47.5°	449.2	457.6	524.5	1248.5	903.2	647.5	511.3	448.0	439.7
50°	415.8	426.5	479.1	1106.3	830.3	597.4	471.9	418.2	411.0
52.5°	383.5	388.3	440.9	964.1	753.9	548.4	430.1	388.3	383.5
55°	340.5	359.6	395.5	818.4	677.4	503.0	387.1	357.2	353.6
57.5°	291.5	316.6	354.8	687.0	605.7	452.8	352.4	328.5	313.0
60°	234.2	264.0	314.2	571.1	542.4	407.4	316.6	279.6	260.4
62.5°	205.5	215.0	277.2	477.9	477.9	364.4	280.8	240.1	231.8
65°	179.2	186.4	237.7	395.5	415.8	316.6	248.5	207.9	200.7



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	156.5	162.5	181.6	329.7	358.4	276.0	205.5	181.6	173.2
70°	133.8	138.6	155.3	268.8	305.8	235.4	173.2	155.3	149.3
72.5°	113.5	118.3	127.8	201.9	250.9	195.9	145.8	132.6	127.8
75°	94.4	96.8	106.3	150.5	201.9	156.5	117.1	108.7	106.3
77.5°	76.5	77.7	83.6	107.5	156.5	119.5	94.4	87.2	86.0
80°	58.5	59.7	64.5	77.7	114.7	86.0	70.5	66.9	64.5
82.5°	41.8	43.0	45.4	52.6	77.7	58.5	50.2	49.0	45.4
85°	26.3	26.3	28.7	32.3	44.2	33.5	31.1	29.9	28.7
87.5°	11.9	11.9	13.1	13.1	20.3	14.3	14.3	13.1	11.9
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	19.09	20.56	19.46	20.87	21.19	21.79	23.25	22.15	23.57	23.88
	3H	20.21	21.52	20.58	21.85	22.21	23.23	24.54	23.60	24.87	25.23
	4H	20.65	21.88	21.05	22.23	22.61	23.73	24.96	24.13	25.31	25.69
	6H	20.99	22.13	21.41	22.50	22.89	24.06	25.19	24.47	25.56	25.95
	8H	21.11	22.19	21.53	22.58	22.98	24.14	25.23	24.57	25.62	26.02
	12H	21.18	22.22	21.61	22.60	23.03	24.19	25.23	24.62	25.61	26.04
4H	2H	20.26	21.49	20.66	21.84	22.22	22.24	23.47	22.64	23.82	24.20
	3H	21.49	22.51	21.90	22.91	23.31	23.90	24.92	24.31	25.32	25.72
	4H	21.97	22.88	22.40	23.30	23.74	24.53	25.45	24.97	25.87	26.31
	6H	22.37	23.16	22.83	23.61	24.07	24.99	25.79	25.45	26.23	26.69
	8H	22.50	23.25	22.97	23.69	24.16	25.12	25.86	25.58	26.31	26.77
	12H	22.60	23.26	23.09	23.74	24.22	25.20	25.86	25.68	26.34	26.81
8H	4H	22.37	23.11	22.83	23.56	24.02	24.65	25.39	25.11	25.84	26.30
	6H	22.86	23.47	23.36	23.96	24.44	25.21	25.82	25.71	26.31	26.79
	8H	23.05	23.60	23.56	24.11	24.60	25.41	25.96	25.92	26.47	26.96
	12H	23.21	23.69	23.72	24.18	24.75	25.56	26.04	26.07	26.53	27.10
12H	4H	22.42	23.08	22.90	23.56	24.03	24.64	25.30	25.12	25.78	26.25
	6H	22.93	23.48	23.44	23.99	24.48	25.21	25.76	25.72	26.27	26.76
	8H	23.17	23.66	23.68	24.15	24.72	25.45	25.94	25.96	26.43	27.00