

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: P735905

Luminaire Tested: S122RDRP-S1005D940-X4F0-XX-UDD-W-W

Issue Date: 1/24/2024

Test Information

Test Method: LM-79-2024
Report Number: P735905
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-S1005D940-X4F0-XX-UDD-W-W
Description: DEFINE 2 REGRESSED DIRECT RECESSED WITH WALL WASH OPTIC
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

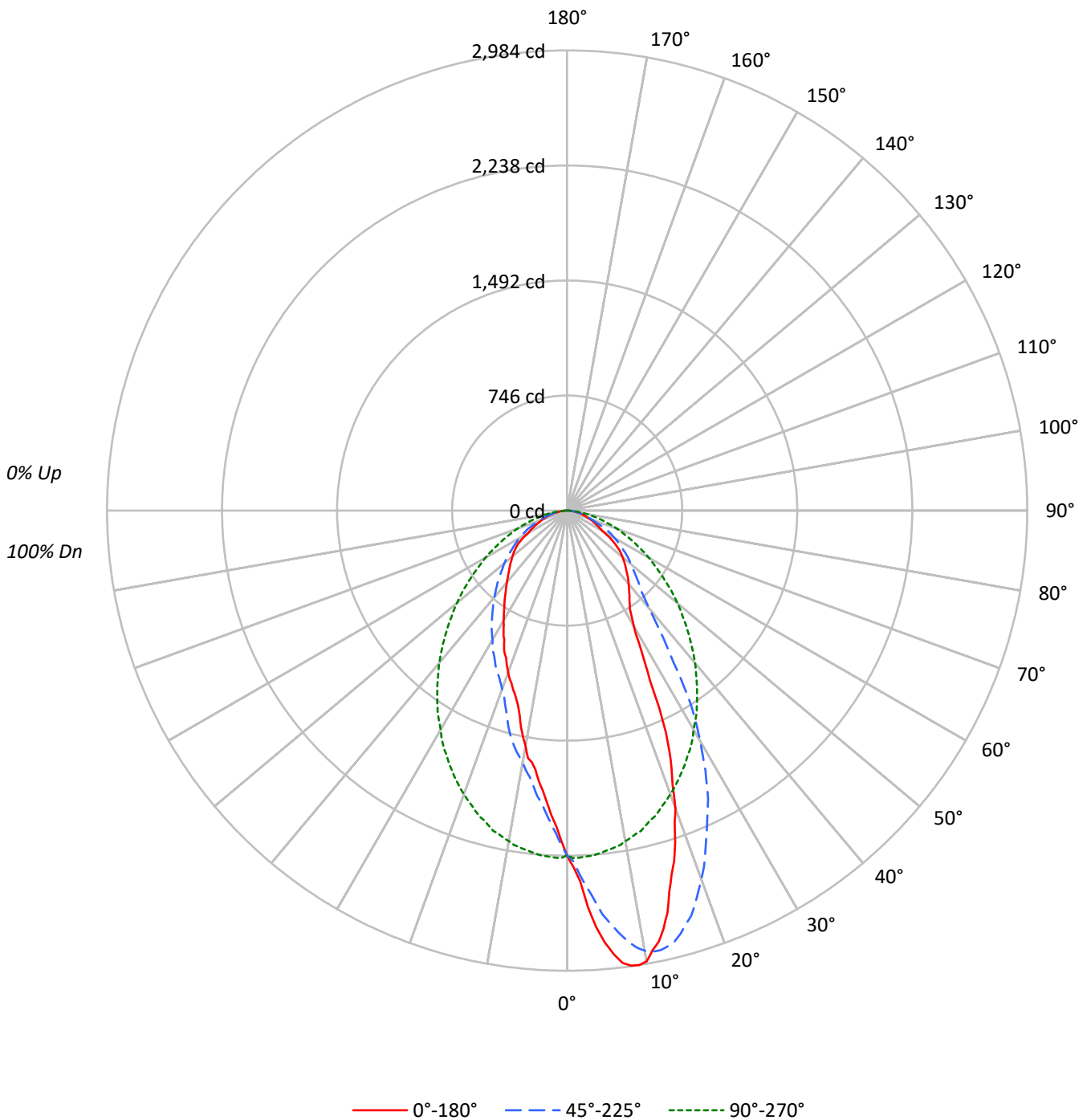
Lumens per Lamp: N/A
Luminaire Lumens: 3832.0 lumens
Efficiency: N/A
Efficacy: 91.7 lumens/watt
Spacing Criteria (0/90/45): 0.82 / 1.11 / 1
Luminous Opening: Rectangular (W 4' x L: 0.14' x H: 0')
CIE Type: Direct

Input Watts (W): 41.8
Input Voltage (V): 120
Input Current (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	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°	42986	42986	42986	42986	42986
5°	54232	50728	43151	36664	35107
10°	57929	56565	42496	32442	30317
15°	50952	56546	41373	29089	25262
20°	42004	52045	40053	25252	22858
25°	29948	45691	38446	23389	20564
30°	19163	38326	36384	21460	18266
35°	16503	28242	34491	19912	16566
40°	15557	20650	32361	18425	15218
45°	14695	17693	30086	17071	14366
50°	13995	16127	27950	15884	13833
55°	12845	14916	25552	14601	13341
60°	10133	13597	23469	13701	11271
65°	9174	12171	21285	12721	10274
70°	8464	9824	19349	10959	9447
75°	7887	8890	16881	9788	8890
80°	7295	8036	14290	8778	8036
85°	6528	7123	10983	7719	7123

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 42112 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	216.9	5.7
10°-20°	582.8	15.2
20°-30°	731.1	19.1
30°-40°	696.6	18.2
40°-50°	614.5	16.0
50°-60°	483.4	12.6
60°-70°	308.4	8.0
70°-80°	156.8	4.1
80°-90°	41.6	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°	1530.8	39.9
0°-40°	2227.3	58.1
0°-60°	3325.2	86.8
0°-90°	3832.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3832.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2236	2236	2236	2236	2236	
5°	2811	2629	2236	1900	1820	273
15°	2560	2842	2079	1462	1270	709
25°	1412	2154	1813	1103	970	636
35°	703	1204	1470	849	706	447
45°	541	651	1107	628	528	419
55°	383	445	762	436	398	337
65°	202	268	468	280	226	202
75°	106	120	227	132	120	113
85°	30	32	50	35	32	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°	2236.4	2236.4	2236.4	2236.4	2236.4	2236.4	2236.4	2236.4	2236.4
1°	2311.8	2322.5	2272.8	2278.1	2253.9	2210.9	2169.2	2173.2	2143.6
2°	2404.5	2432.8	2364.2	2322.5	2252.6	2177.3	2093.9	2083.1	2046.8
3°	2572.6	2559.2	2446.2	2361.5	2247.2	2134.2	2029.3	2005.1	1974.2
4°	2708.5	2668.1	2529.6	2411.3	2244.5	2084.5	1966.1	1924.4	1893.5
5°	2810.7	2759.6	2629.1	2448.9	2236.4	2056.2	1900.2	1853.2	1819.5
6°	2892.7	2853.7	2693.7	2483.9	2225.7	2014.5	1861.2	1798.0	1763.1
7°	2955.9	2923.6	2759.6	2531.0	2216.3	1972.9	1799.4	1733.5	1691.8
8°	2980.1	2965.3	2820.1	2564.6	2205.5	1943.3	1744.2	1685.1	1647.4
9°	2984.2	2985.5	2868.5	2596.9	2196.1	1889.5	1705.2	1644.7	1624.5
10°	2968.0	2980.1	2898.1	2633.2	2177.3	1862.6	1662.2	1604.4	1553.3
11°	2904.8	2958.6	2912.9	2657.4	2161.1	1819.5	1624.5	1549.2	1498.1
12°	2857.7	2908.9	2914.2	2688.3	2142.3	1799.4	1592.3	1491.4	1437.6
13°	2779.8	2833.5	2900.8	2696.4	2131.5	1749.6	1551.9	1432.2	1366.3
14°	2687.0	2773.0	2879.3	2713.9	2104.6	1706.6	1511.6	1348.9	1309.9
15°	2560.5	2682.9	2841.6	2720.6	2079.1	1677.0	1461.8	1307.2	1269.5
16°	2455.6	2594.2	2790.5	2720.6	2063.0	1636.7	1408.0	1270.9	1233.2
17°	2376.3	2489.3	2748.8	2721.9	2036.1	1608.4	1354.2	1237.2	1207.7
18°	2264.7	2391.1	2682.9	2716.5	2007.8	1574.8	1308.5	1209.0	1172.7
19°	2141.0	2291.6	2613.0	2707.1	1983.6	1539.8	1260.1	1179.4	1148.5
20°	2053.5	2192.1	2544.4	2692.3	1958.1	1517.0	1234.5	1145.8	1117.5
21°	1907.0	2076.4	2475.8	2672.2	1931.2	1478.0	1199.6	1116.2	1085.3
22.5°	1757.7	1913.7	2349.4	2638.5	1886.8	1429.5	1160.6	1079.9	1034.2
23°	1699.9	1874.7	2310.4	2629.1	1872.0	1417.4	1148.5	1063.8	1023.4
24°	1576.1	1757.7	2229.7	2599.5	1839.7	1377.1	1125.6	1031.5	1003.2
25°	1412.1	1658.2	2154.4	2568.6	1812.8	1347.5	1102.8	1005.9	969.6
26°	1226.5	1522.3	2085.8	2531.0	1775.2	1307.2	1071.8	981.7	930.6
27°	1112.2	1405.3	1993.0	2490.6	1748.3	1277.6	1046.3	945.4	909.1
28°	1020.7	1221.1	1909.6	2451.6	1716.0	1241.3	1028.8	919.9	876.8
29°	921.2	1120.2	1811.5	2399.2	1681.0	1199.6	1000.5	894.3	848.6
30°	863.4	1012.7	1726.8	2360.2	1639.3	1171.3	966.9	868.8	823.0
32.5°	758.5	835.1	1496.8	2248.5	1560.0	1090.7	911.8	798.8	759.8
35°	703.3	743.7	1203.6	2118.1	1469.9	1023.4	848.6	741.0	706.0
37.5°	661.7	685.9	993.8	1978.2	1378.4	964.2	790.8	687.2	653.6
40°	620.0	638.8	823.0	1843.8	1289.7	906.4	734.3	632.1	606.5
42.5°	582.3	597.1	714.1	1710.6	1198.2	847.2	679.1	589.0	566.2
45°	540.6	554.1	650.9	1549.2	1106.8	786.7	628.0	542.0	528.5
47.5°	505.7	515.1	590.4	1405.3	1016.7	728.9	575.6	504.3	494.9
50°	468.0	480.1	539.3	1245.3	934.7	672.4	531.2	470.7	462.6
52.5°	431.7	437.1	496.2	1085.3	848.6	617.3	484.1	437.1	431.7
55°	383.3	404.8	445.1	921.2	762.5	566.2	435.7	402.1	398.1
57.5°	328.1	356.4	399.4	773.3	681.8	509.7	396.7	369.8	352.3
60°	263.6	297.2	353.7	642.8	610.5	458.6	356.4	314.7	293.2
62.5°	231.3	242.1	312.0	537.9	537.9	410.2	316.0	270.3	260.9
65°	201.7	209.8	267.6	445.1	468.0	356.4	279.7	234.0	225.9



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	176.2	182.9	204.4	371.2	403.4	310.7	231.3	204.4	195.0
70°	150.6	156.0	174.8	302.6	344.3	264.9	195.0	174.8	168.1
72.5°	127.8	133.1	143.9	227.3	282.4	220.6	164.1	149.3	143.9
75°	106.2	108.9	119.7	169.4	227.3	176.2	131.8	122.4	119.7
77.5°	86.1	87.4	94.1	121.0	176.2	134.5	106.2	98.2	96.8
80°	65.9	67.2	72.6	87.4	129.1	96.8	79.3	75.3	72.6
82.5°	47.1	48.4	51.1	59.2	87.4	65.9	56.5	55.1	51.1
85°	29.6	29.6	32.3	36.3	49.8	37.7	35.0	33.6	32.3
87.5°	13.4	13.4	14.8	14.8	22.9	16.1	16.1	14.8	13.4
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	19.50	20.97	19.87	21.28	21.60	22.20	23.67	22.56	23.98	24.29
	3H	20.62	21.93	21.00	22.26	22.62	23.64	24.95	24.02	25.28	25.64
	4H	21.06	22.29	21.46	22.64	23.02	24.14	25.37	24.54	25.72	26.10
	6H	21.40	22.54	21.82	22.91	23.30	24.47	25.60	24.88	25.97	26.36
	8H	21.52	22.60	21.95	22.99	23.39	24.56	25.64	24.98	26.03	26.43
	12H	21.59	22.63	22.02	23.01	23.44	24.60	25.64	25.03	26.02	26.45
4H	2H	20.67	21.90	21.07	22.25	22.63	22.65	23.88	23.05	24.23	24.61
	3H	21.90	22.92	22.31	23.32	23.72	24.31	25.33	24.72	25.73	26.13
	4H	22.38	23.29	22.81	23.71	24.15	24.95	25.86	25.38	26.28	26.72
	6H	22.78	23.57	23.24	24.02	24.48	25.40	26.20	25.86	26.64	27.10
	8H	22.91	23.66	23.38	24.10	24.57	25.53	26.27	25.99	26.72	27.19
	12H	23.01	23.68	23.50	24.16	24.63	25.61	26.27	26.09	26.75	27.22
8H	4H	22.78	23.52	23.24	23.97	24.44	25.06	25.80	25.52	26.25	26.72
	6H	23.27	23.88	23.77	24.38	24.85	25.62	26.23	26.12	26.73	27.20
	8H	23.46	24.01	23.98	24.52	25.01	25.82	26.37	26.34	26.88	27.37
	12H	23.62	24.10	24.13	24.60	25.16	25.97	26.45	26.48	26.95	27.51
12H	4H	22.83	23.49	23.31	23.97	24.44	25.05	25.71	25.53	26.19	26.66
	6H	23.34	23.89	23.86	24.40	24.89	25.62	26.17	26.13	26.68	27.17
	8H	23.58	24.07	24.09	24.56	25.13	25.86	26.35	26.37	26.84	27.41