

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: P735901

Luminaire Tested: S122RDRP-S1005D850-X4F0-XX-UDD-W-W

Issue Date: 1/24/2024

Test Information

Test Method: LM-79-2024
Report Number: P735901
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-S1005D850-X4F0-XX-UDD-W-W
Description: DEFINE 2 REGRESSED DIRECT RECESSED WITH WALL WASH OPTIC
Light Source: 5000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

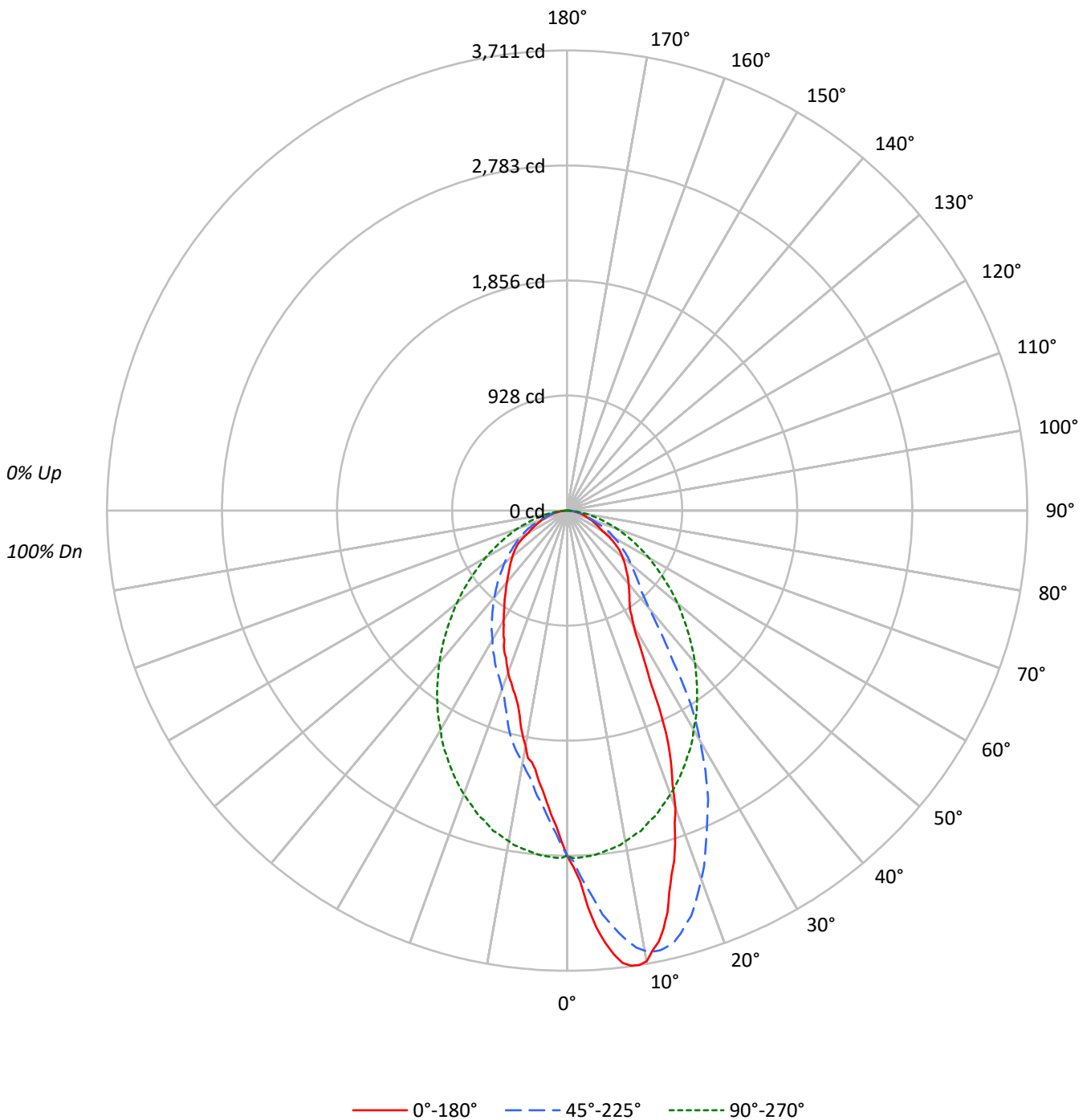
Lumens per Lamp: N/A
Luminaire Lumens: 4765.8 lumens
Efficiency: N/A
Efficacy: 114.0 lumens/watt
Spacing Criteria (0/90/45): 0.82 / 1.11 / 1
Luminous Opening: Rectangular (W 4' x L: 0.14' x H: 0')
CIE Type: Direct

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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	53462	53462	53462	53462	53462
5°	67447	63090	53666	45599	43662
10°	72046	70348	52850	40347	37704
15°	63369	70324	51454	36177	31419
20°	52240	64727	49812	31406	28430
25°	37246	56826	47816	29087	25575
30°	23833	47663	45251	26689	22719
35°	20525	35125	42896	24765	20604
40°	19346	25684	40247	22914	18927
45°	18278	22005	37417	21233	17867
50°	17404	20056	34759	19754	17203
55°	15975	18552	31779	18160	16591
60°	12601	16911	29189	17038	14016
65°	11411	15136	26470	15823	12780
70°	10526	12218	24065	13628	11751
75°	9810	11058	20995	12172	11058
80°	9077	9995	17777	10925	9995
85°	8116	8844	13651	9593	8844

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 52376 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	269.7	5.7
10°-20°	724.8	15.2
20°-30°	909.2	19.1
30°-40°	866.3	18.2
40°-50°	764.3	16.0
50°-60°	601.2	12.6
60°-70°	383.6	8.0
70°-80°	195.0	4.1
80°-90°	51.7	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°	1903.8	39.9
0°-40°	2770.1	58.1
0°-60°	4135.5	86.8
0°-90°	4765.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4765.8	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2781	2781	2781	2781	2781	
5°	3496	3270	2781	2363	2263	340
15°	3184	3534	2586	1818	1579	882
25°	1756	2679	2255	1372	1206	792
35°	875	1497	1828	1055	878	556
45°	672	810	1376	781	657	521
55°	477	554	948	542	495	419
65°	251	333	582	348	281	251
75°	132	149	283	164	149	140
85°	37	40	62	44	40	42
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°	2781.4	2781.4	2781.4	2781.4	2781.4	2781.4	2781.4	2781.4	2781.4
1°	2875.1	2888.5	2826.6	2833.3	2803.2	2749.6	2697.8	2702.8	2666.0
2°	2990.5	3025.6	2940.3	2888.5	2801.5	2707.8	2604.1	2590.7	2545.6
3°	3199.5	3182.8	3042.3	2937.0	2794.8	2654.3	2523.8	2493.7	2455.3
4°	3368.5	3318.3	3146.0	2998.8	2791.4	2592.4	2445.2	2393.4	2354.9
5°	3495.6	3432.0	3269.8	3045.7	2781.4	2557.3	2363.3	2304.7	2262.9
6°	3597.6	3549.1	3350.1	3089.2	2768.0	2505.4	2314.8	2236.2	2192.7
7°	3676.2	3636.1	3432.0	3147.7	2756.3	2453.6	2237.8	2155.9	2104.0
8°	3706.3	3687.9	3507.3	3189.5	2742.9	2416.8	2169.3	2095.7	2048.8
9°	3711.3	3713.0	3567.5	3229.6	2731.2	2349.9	2120.8	2045.5	2020.4
10°	3691.3	3706.3	3604.3	3274.8	2707.8	2316.4	2067.2	1995.3	1931.8
11°	3612.7	3679.6	3622.7	3304.9	2687.8	2262.9	2020.4	1926.8	1863.2
12°	3554.1	3617.7	3624.4	3343.4	2664.3	2237.8	1980.3	1854.8	1787.9
13°	3457.1	3524.0	3607.6	3353.4	2651.0	2176.0	1930.1	1781.2	1699.3
14°	3341.7	3448.7	3580.9	3375.2	2617.5	2122.4	1879.9	1677.5	1629.0
15°	3184.5	3336.7	3534.0	3383.5	2585.7	2085.6	1818.0	1625.7	1578.9
16°	3054.0	3226.3	3470.5	3383.5	2565.7	2035.5	1751.1	1580.5	1533.7
17°	2955.4	3095.8	3418.6	3385.2	2532.2	2000.3	1684.2	1538.7	1501.9
18°	2816.5	2973.8	3336.7	3378.5	2497.1	1958.5	1627.4	1503.6	1458.4
19°	2662.7	2850.0	3249.7	3366.8	2467.0	1915.0	1567.2	1466.8	1428.3
20°	2553.9	2726.2	3164.4	3348.4	2435.2	1886.6	1535.4	1425.0	1389.9
21°	2371.6	2582.4	3079.1	3323.3	2401.7	1838.1	1491.9	1388.2	1349.7
22.5°	2186.0	2380.0	2921.9	3281.5	2346.6	1777.9	1443.4	1343.0	1286.2
23°	2114.1	2331.5	2873.4	3269.8	2328.2	1762.8	1428.3	1323.0	1272.8
24°	1960.2	2186.0	2773.0	3233.0	2288.0	1712.7	1399.9	1282.8	1247.7
25°	1756.2	2062.2	2679.4	3194.5	2254.6	1675.9	1371.5	1251.0	1205.9
26°	1525.3	1893.3	2594.1	3147.7	2207.7	1625.7	1333.0	1220.9	1157.4
27°	1383.2	1747.8	2478.7	3097.5	2174.3	1588.9	1301.2	1175.8	1130.6
28°	1269.4	1518.7	2375.0	3049.0	2134.1	1543.7	1279.5	1144.0	1090.5
29°	1145.7	1393.2	2252.9	2983.8	2090.7	1491.9	1244.4	1112.2	1055.4
30°	1073.8	1259.4	2147.5	2935.3	2038.8	1456.8	1202.5	1080.5	1023.6
32.5°	943.3	1038.6	1861.5	2796.5	1940.1	1356.4	1134.0	993.5	945.0
35°	874.7	924.9	1496.9	2634.2	1828.1	1272.8	1055.4	921.6	878.1
37.5°	822.9	853.0	1236.0	2460.3	1714.3	1199.2	983.4	854.7	812.8
40°	771.0	794.5	1023.6	2293.0	1604.0	1127.3	913.2	786.1	754.3
42.5°	724.2	742.6	888.1	2127.5	1490.2	1053.7	844.6	732.6	704.1
45°	672.4	689.1	809.5	1926.8	1376.5	978.4	781.1	674.0	657.3
47.5°	628.9	640.6	734.2	1747.8	1264.4	906.5	715.8	627.2	615.5
50°	582.0	597.1	670.7	1548.8	1162.4	836.3	660.6	585.4	575.3
52.5°	536.9	543.6	617.2	1349.7	1055.4	767.7	602.1	543.6	536.9
55°	476.7	503.4	553.6	1145.7	948.3	704.1	541.9	500.1	495.1
57.5°	408.1	443.2	496.7	961.7	848.0	633.9	493.4	459.9	438.2
60°	327.8	369.6	439.9	799.5	759.3	570.3	443.2	391.4	364.6
62.5°	287.7	301.1	388.0	669.0	669.0	510.1	393.0	336.2	324.5
65°	250.9	260.9	332.8	553.6	582.0	443.2	347.9	291.0	281.0



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	219.1	227.5	254.2	461.6	501.8	386.4	287.7	254.2	242.5
70°	187.3	194.0	217.4	376.3	428.2	329.5	242.5	217.4	209.1
72.5°	158.9	165.6	179.0	282.7	351.2	274.3	204.0	185.7	179.0
75°	132.1	135.5	148.9	210.7	282.7	219.1	163.9	152.2	148.9
77.5°	107.0	108.7	117.1	150.5	219.1	167.3	132.1	122.1	120.4
80°	82.0	83.6	90.3	108.7	160.6	120.4	98.7	93.7	90.3
82.5°	58.5	60.2	63.6	73.6	108.7	82.0	70.2	68.6	63.6
85°	36.8	36.8	40.1	45.2	61.9	46.8	43.5	41.8	40.1
87.5°	16.7	16.7	18.4	18.4	28.4	20.1	20.1	18.4	16.7
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	20.26	21.73	20.63	22.04	22.36	22.96	24.42	23.32	24.74	25.05
	3H	21.38	22.69	21.75	23.02	23.38	24.40	25.71	24.77	26.04	26.40
	4H	21.82	23.05	22.22	23.40	23.78	24.90	26.13	25.30	26.48	26.86
	6H	22.16	23.30	22.57	23.66	24.06	25.22	26.36	25.64	26.73	27.12
	8H	22.28	23.36	22.70	23.75	24.15	25.31	26.39	25.74	26.78	27.19
	12H	22.35	23.38	22.78	23.77	24.20	25.36	26.39	25.79	26.78	27.21
4H	2H	21.43	22.66	21.83	23.01	23.39	23.41	24.64	23.81	24.99	25.37
	3H	22.66	23.67	23.07	24.08	24.48	25.06	26.08	25.48	26.49	26.89
	4H	23.14	24.05	23.57	24.47	24.91	25.70	26.62	26.14	27.04	27.48
	6H	23.54	24.33	24.00	24.78	25.24	26.16	26.95	26.62	27.40	27.86
	8H	23.67	24.42	24.14	24.86	25.33	26.29	27.03	26.75	27.48	27.94
	12H	23.77	24.43	24.25	24.91	25.38	26.37	27.03	26.85	27.51	27.98
8H	4H	23.54	24.28	24.00	24.73	25.19	25.82	26.56	26.28	27.00	27.47
	6H	24.03	24.64	24.53	25.13	25.61	26.38	26.99	26.88	27.48	27.96
	8H	24.22	24.77	24.73	25.28	25.77	26.58	27.13	27.09	27.64	28.13
	12H	24.38	24.86	24.89	25.35	25.92	26.73	27.21	27.24	27.70	28.27
12H	4H	23.58	24.25	24.07	24.73	25.20	25.81	26.47	26.29	26.95	27.42
	6H	24.10	24.65	24.61	25.16	25.65	26.38	26.93	26.89	27.44	27.93
	8H	24.34	24.83	24.85	25.32	25.88	26.62	27.11	27.13	27.60	28.17