

Scaled data based on original data using  
LM-79-2019 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: S122RDR-S1005D850-X4F0-XX-UDD-W-W

Issue Date: 1/24/2024

**Test Information**

Test Method: LM-79-2019  
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: S122RDR-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

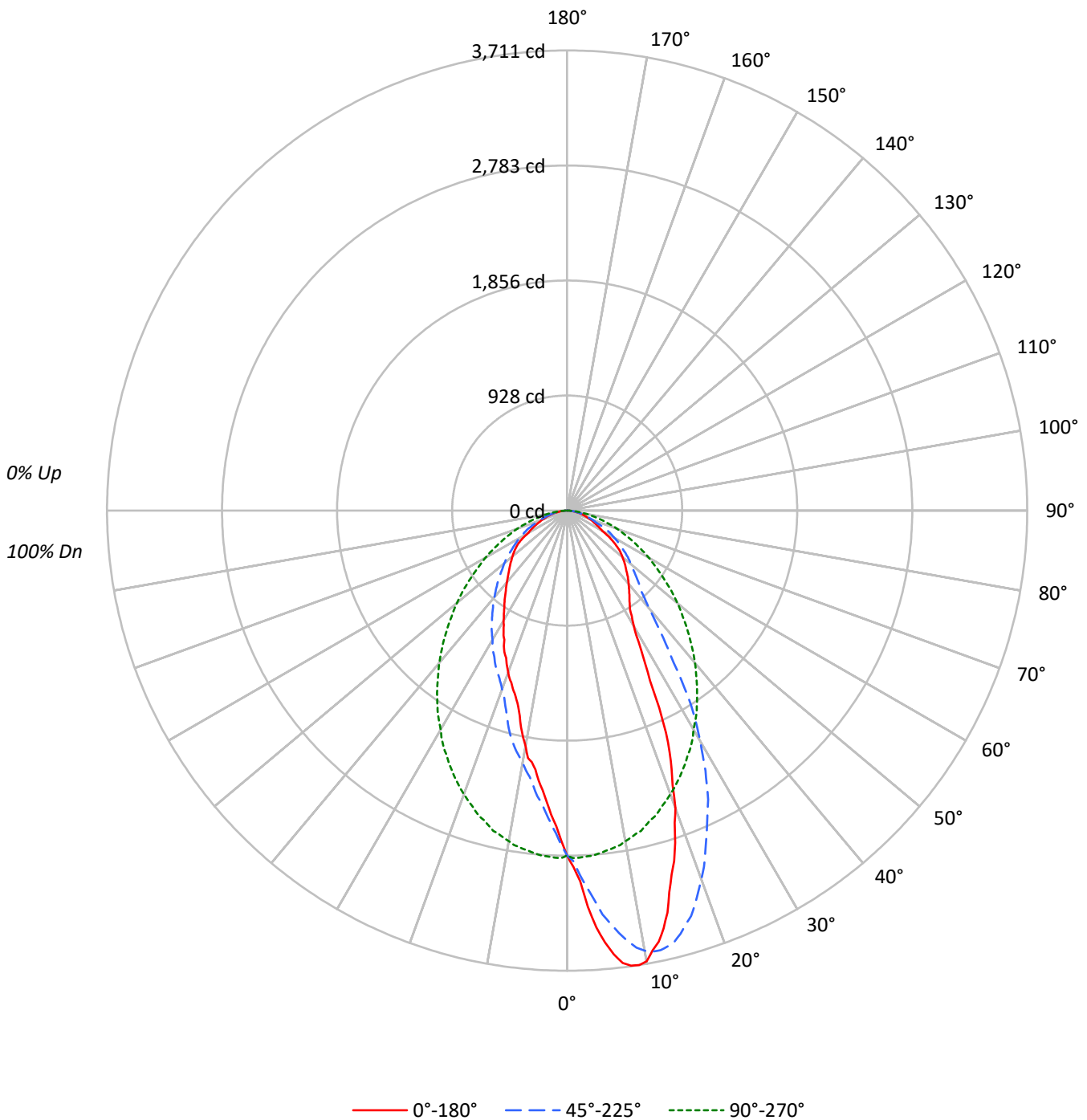
Input Watts (W): 41.8  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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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	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°	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

(END OF REPORT)