

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: P735915

Luminaire Tested: S122RDR-S290D950-X4F0-XX-UDD-W-W

Issue Date: 1/24/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P735915  
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-S290D950-X4F0-XX-UDD-W-W  
Description: DEFINE 2 REGRESSED DIRECT RECESSED WITH WALL WASH OPTIC  
Light Source: 5000K CCT, 90 CRI LEDS  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1183.2 lumens  
Efficiency: N/A  
Efficacy: 94.7 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

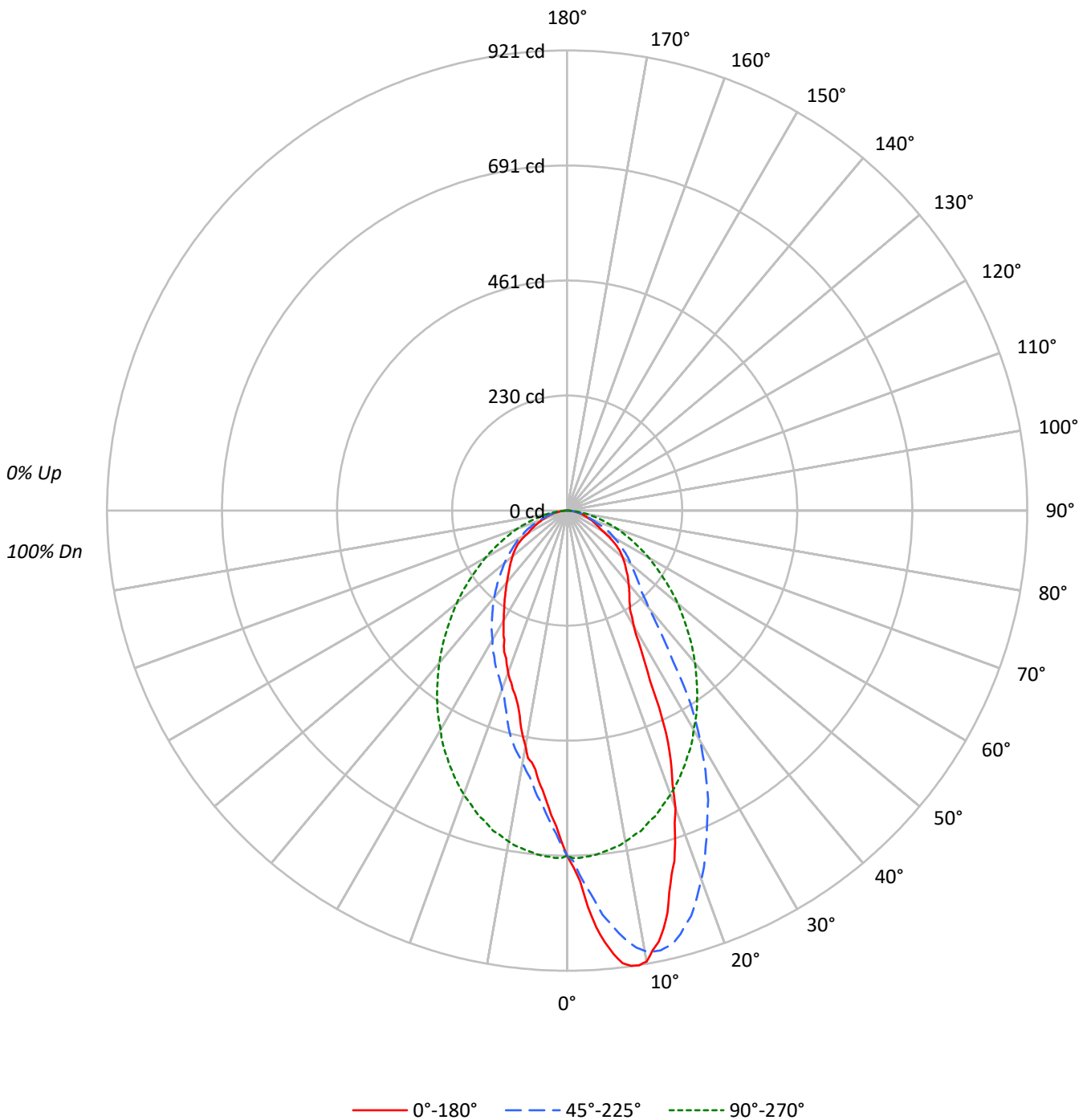
Input Watts (W): 12.5  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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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°	13272	13272	13272	13272	13272
5°	16744	15663	13323	11320	10840
10°	17886	17465	13122	10017	9361
15°	15732	17460	12773	8983	7801
20°	12970	16069	12367	7797	7059
25°	9247	14108	11870	7221	6350
30°	5917	11834	11235	6625	5640
35°	5097	8720	10648	6148	5115
40°	4803	6376	9991	5688	4700
45°	4537	5464	9288	5271	4436
50°	4321	4979	8630	4904	4270
55°	3964	4604	7889	4507	4119
60°	3129	4198	7246	4229	3479
65°	2833	3757	6572	3930	3175
70°	2613	3035	5974	3383	2917
75°	2436	2748	5213	3023	2748
80°	2247	2479	4417	2712	2479
85°	2007	2205	3396	2382	2205

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 67.5°  
 Vertical Angle: 45°  
 Luminance: 13002 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	67.0	5.7
10°-20°	180.0	15.2
20°-30°	225.7	19.1
30°-40°	215.1	18.2
40°-50°	189.7	16.0
50°-60°	149.2	12.6
60°-70°	95.2	8.0
70°-80°	48.4	4.1
80°-90°	12.8	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°	472.6	39.9
0°-40°	687.7	58.1
0°-60°	1026.7	86.8
0°-90°	1183.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1183.2	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	690	690	690	690	690	
5°	868	812	690	587	562	84
15°	791	877	642	451	392	219
25°	436	665	560	340	299	197
35°	217	372	454	262	218	138
45°	167	201	342	194	163	129
55°	118	137	235	134	123	104
65°	62	83	144	86	70	62
75°	33	37	70	41	37	35
85°	9	10	15	11	10	10
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°	690.5	690.5	690.5	690.5	690.5	690.5	690.5	690.5	690.5
1°	713.8	717.1	701.7	703.4	695.9	682.6	669.8	671.0	661.9
2°	742.4	751.1	730.0	717.1	695.5	672.3	646.5	643.2	632.0
3°	794.3	790.2	755.3	729.1	693.8	659.0	626.6	619.1	609.6
4°	836.3	823.8	781.0	744.5	693.0	643.6	607.1	594.2	584.6
5°	867.8	852.1	811.8	756.1	690.5	634.9	586.7	572.2	561.8
6°	893.2	881.1	831.7	766.9	687.2	622.0	574.7	555.2	544.4
7°	912.7	902.7	852.1	781.5	684.3	609.1	555.6	535.2	522.4
8°	920.1	915.6	870.7	791.8	681.0	600.0	538.6	520.3	508.7
9°	921.4	921.8	885.7	801.8	678.1	583.4	526.5	507.8	501.6
10°	916.4	920.1	894.8	813.0	672.3	575.1	513.2	495.4	479.6
11°	896.9	913.5	899.4	820.5	667.3	561.8	501.6	478.3	462.6
12°	882.4	898.1	899.8	830.0	661.5	555.6	491.6	460.5	443.9
13°	858.3	874.9	895.6	832.5	658.1	540.2	479.2	442.2	421.9
14°	829.6	856.2	889.0	837.9	649.8	526.9	466.7	416.5	404.4
15°	790.6	828.4	877.4	840.0	641.9	517.8	451.4	403.6	392.0
16°	758.2	801.0	861.6	840.0	637.0	505.3	434.7	392.4	380.8
17°	733.7	768.6	848.7	840.4	628.7	496.6	418.1	382.0	372.9
18°	699.2	738.3	828.4	838.8	619.9	486.2	404.0	373.3	362.1
19°	661.0	707.6	806.8	835.9	612.5	475.4	389.1	364.2	354.6
20°	634.1	676.8	785.6	831.3	604.6	468.4	381.2	353.8	345.1
21°	588.8	641.1	764.4	825.1	596.3	456.3	370.4	344.6	335.1
22.5°	542.7	590.9	725.4	814.7	582.6	441.4	358.3	333.4	319.3
23°	524.8	578.8	713.4	811.8	578.0	437.7	354.6	328.4	316.0
24°	486.6	542.7	688.5	802.6	568.0	425.2	347.5	318.5	309.8
25°	436.0	512.0	665.2	793.1	559.7	416.1	340.5	310.6	299.4
26°	378.7	470.0	644.0	781.5	548.1	403.6	330.9	303.1	287.3
27°	343.4	433.9	615.4	769.0	539.8	394.5	323.0	291.9	280.7
28°	315.2	377.0	589.6	757.0	529.8	383.3	317.7	284.0	270.7
29°	284.4	345.9	559.3	740.8	519.0	370.4	308.9	276.1	262.0
30°	266.6	312.7	533.2	728.7	506.2	361.7	298.5	268.2	254.1
32.5°	234.2	257.9	462.2	694.3	481.7	336.8	281.5	246.6	234.6
35°	217.2	229.6	371.6	654.0	453.8	316.0	262.0	228.8	218.0
37.5°	204.3	211.8	306.9	610.8	425.6	297.7	244.2	212.2	201.8
40°	191.4	197.2	254.1	569.3	398.2	279.9	226.7	195.2	187.3
42.5°	179.8	184.4	220.5	528.2	370.0	261.6	209.7	181.9	174.8
45°	166.9	171.1	201.0	478.3	341.7	242.9	193.9	167.3	163.2
47.5°	156.1	159.0	182.3	433.9	313.9	225.1	177.7	155.7	152.8
50°	144.5	148.2	166.5	384.5	288.6	207.6	164.0	145.3	142.8
52.5°	133.3	134.9	153.2	335.1	262.0	190.6	149.5	134.9	133.3
55°	118.3	125.0	137.4	284.4	235.4	174.8	134.5	124.2	122.9
57.5°	101.3	110.0	123.3	238.8	210.5	157.4	122.5	114.2	108.8
60°	81.4	91.8	109.2	198.5	188.5	141.6	110.0	97.2	90.5
62.5°	71.4	74.7	96.3	166.1	166.1	126.6	97.6	83.5	80.6
65°	62.3	64.8	82.6	137.4	144.5	110.0	86.4	72.2	69.8



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	54.4	56.5	63.1	114.6	124.6	95.9	71.4	63.1	60.2
70°	46.5	48.2	54.0	93.4	106.3	81.8	60.2	54.0	51.9
72.5°	39.4	41.1	44.4	70.2	87.2	68.1	50.7	46.1	44.4
75°	32.8	33.6	37.0	52.3	70.2	54.4	40.7	37.8	37.0
77.5°	26.6	27.0	29.1	37.4	54.4	41.5	32.8	30.3	29.9
80°	20.3	20.8	22.4	27.0	39.9	29.9	24.5	23.3	22.4
82.5°	14.5	14.9	15.8	18.3	27.0	20.3	17.4	17.0	15.8
85°	9.1	9.1	10.0	11.2	15.4	11.6	10.8	10.4	10.0
87.5°	4.2	4.2	4.6	4.6	7.1	5.0	5.0	4.6	4.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)