

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: P735912

Luminaire Tested: S122RDR-S290D930-X4F0-XX-UDD-W-W

Issue Date: 1/24/2024

Test Information

Test Method: LM-79-2019
Report Number: P735912
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-S290D930-X4F0-XX-UDD-W-W
Description: DEFINE 2 REGRESSED DIRECT RECESSED WITH WALL WASH OPTIC
Light Source: 3000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1011.1 lumens
Efficiency: N/A
Efficacy: 80.9 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

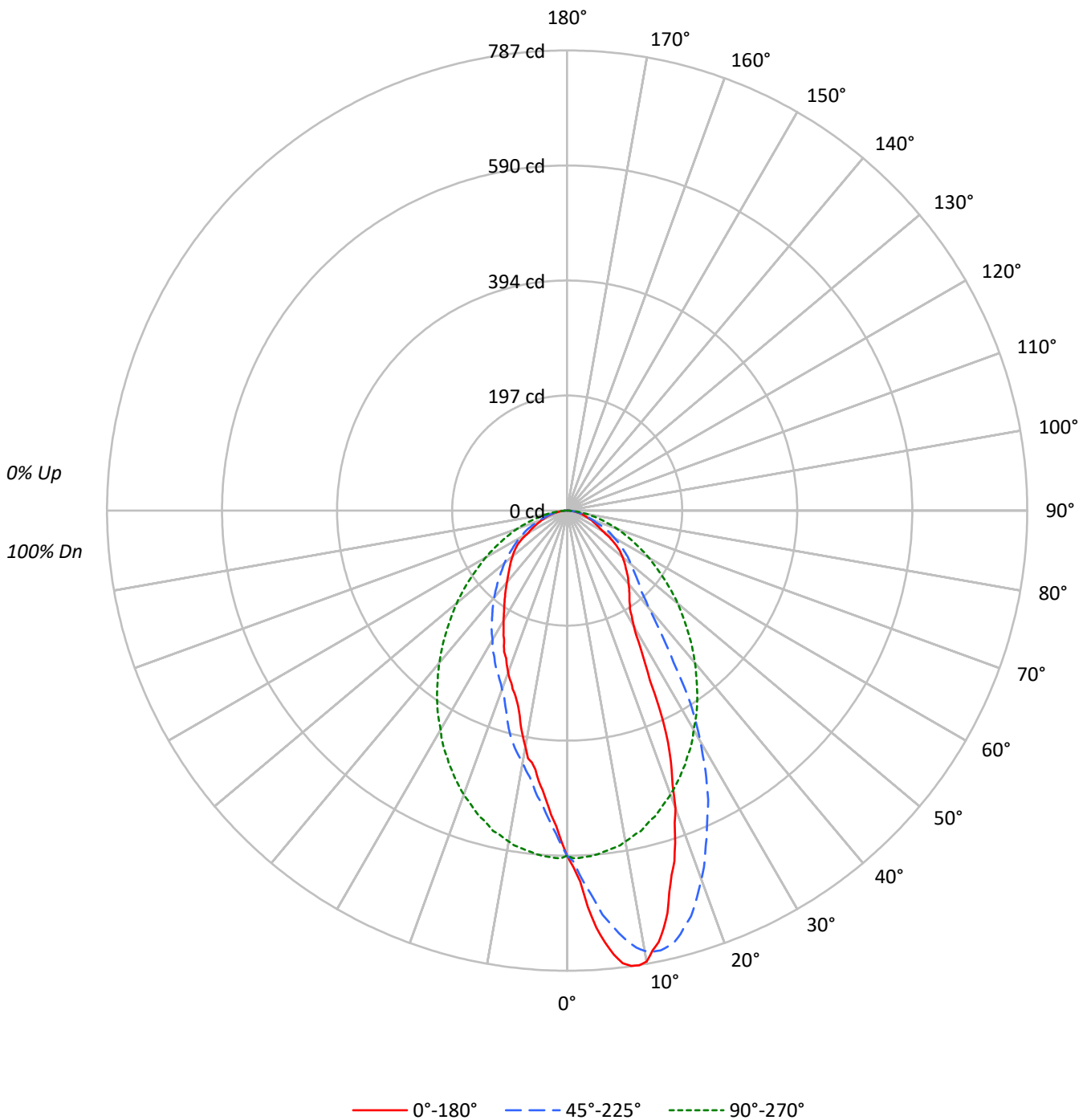
Input Watts (W): 12.5
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	11342	11342	11342	11342	11342
5°	14311	13385	11386	9674	9263
10°	15286	14925	11213	8561	8000
15°	13446	14921	10917	7675	6666
20°	11084	13733	10569	6664	6032
25°	7902	12057	10146	6172	5427
30°	5056	10112	9601	5662	4821
35°	4355	7452	9102	5254	4372
40°	4105	5450	8539	4863	4015
45°	3879	4670	7937	4504	3792
50°	3693	4255	7374	4192	3651
55°	3388	3938	6742	3854	3519
60°	2676	3587	6193	3614	2975
65°	2420	3211	5617	3357	2711
70°	2231	2591	5103	2894	2495
75°	2079	2347	4456	2584	2347
80°	1926	2125	3775	2313	2125
85°	1720	1875	2889	2029	1875

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 11112 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	57.2	5.7
10°-20°	153.8	15.2
20°-30°	192.9	19.1
30°-40°	183.8	18.2
40°-50°	162.2	16.0
50°-60°	127.5	12.6
60°-70°	81.4	8.0
70°-80°	41.4	4.1
80°-90°	11.0	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°	403.9	39.9
0°-40°	587.7	58.1
0°-60°	877.4	86.8
0°-90°	1011.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1011.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	590	590	590	590	590	
5°	742	694	590	501	480	72
15°	676	750	549	386	335	187
25°	373	568	478	291	256	168
35°	186	318	388	224	186	118
45°	143	172	292	166	140	111
55°	101	118	201	115	105	89
65°	53	71	124	74	60	53
75°	28	32	60	35	32	30
85°	8	8	13	9	8	9
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°	590.1	590.1	590.1	590.1	590.1	590.1	590.1	590.1	590.1
1°	610.0	612.8	599.7	601.1	594.7	583.4	572.4	573.5	565.6
2°	634.5	641.9	623.8	612.8	594.4	574.5	552.5	549.7	540.1
3°	678.8	675.3	645.5	623.1	593.0	563.2	535.5	529.1	520.9
4°	714.7	704.0	667.5	636.3	592.3	550.0	518.8	507.8	499.6
5°	741.7	728.2	693.7	646.2	590.1	542.6	501.4	489.0	480.1
6°	763.3	753.0	710.8	655.4	587.3	531.6	491.1	474.4	465.2
7°	780.0	771.5	728.2	667.8	584.8	520.6	474.8	457.4	446.4
8°	786.4	782.5	744.1	676.7	582.0	512.8	460.3	444.6	434.7
9°	787.4	787.8	756.9	685.2	579.5	498.6	450.0	434.0	428.7
10°	783.2	786.4	764.7	694.8	574.5	491.5	438.6	423.3	409.9
11°	766.5	780.7	768.6	701.2	570.3	480.1	428.7	408.8	395.3
12°	754.1	767.6	769.0	709.4	565.3	474.8	420.2	393.5	379.3
13°	733.5	747.7	765.4	711.5	562.5	461.7	409.5	377.9	360.5
14°	709.0	731.7	759.8	716.1	555.4	450.3	398.9	355.9	345.6
15°	675.7	707.9	749.8	717.9	548.6	442.5	385.7	344.9	335.0
16°	648.0	684.5	736.3	717.9	544.4	431.9	371.5	335.3	325.4
17°	627.0	656.8	725.3	718.2	537.3	424.4	357.3	326.5	318.7
18°	597.6	630.9	707.9	716.8	529.8	415.5	345.3	319.0	309.4
19°	564.9	604.7	689.5	714.3	523.4	406.3	332.5	311.2	303.0
20°	541.9	578.4	671.4	710.4	516.7	400.3	325.8	302.3	294.9
21°	503.2	547.9	653.3	705.1	509.6	390.0	316.5	294.5	286.4
22.5°	463.8	505.0	619.9	696.2	497.9	377.2	306.2	285.0	272.9
23°	448.5	494.7	609.6	693.7	494.0	374.0	303.0	280.7	270.0
24°	415.9	463.8	588.4	685.9	485.4	363.4	297.0	272.2	264.7
25°	372.6	437.5	568.5	677.8	478.4	355.6	291.0	265.4	255.9
26°	323.6	401.7	550.4	667.8	468.4	344.9	282.8	259.0	245.6
27°	293.5	370.8	525.9	657.2	461.3	337.1	276.1	249.5	239.9
28°	269.3	322.2	503.9	646.9	452.8	327.5	271.5	242.7	231.4
29°	243.1	295.6	478.0	633.1	443.6	316.5	264.0	236.0	223.9
30°	227.8	267.2	455.6	622.8	432.6	309.1	255.1	229.2	217.2
32.5°	200.1	220.4	395.0	593.3	411.6	287.8	240.6	210.8	200.5
35°	185.6	196.2	317.6	558.9	387.9	270.0	223.9	195.5	186.3
37.5°	174.6	181.0	262.2	522.0	363.7	254.4	208.7	181.3	172.5
40°	163.6	168.6	217.2	486.5	340.3	239.2	193.8	166.8	160.0
42.5°	153.7	157.6	188.4	451.4	316.2	223.6	179.2	155.4	149.4
45°	142.7	146.2	171.8	408.8	292.0	207.6	165.7	143.0	139.5
47.5°	133.4	135.9	155.8	370.8	268.3	192.3	151.9	133.1	130.6
50°	123.5	126.7	142.3	328.6	246.6	177.4	140.2	124.2	122.1
52.5°	113.9	115.3	130.9	286.4	223.9	162.9	127.7	115.3	113.9
55°	101.1	106.8	117.5	243.1	201.2	149.4	115.0	106.1	105.0
57.5°	86.6	94.0	105.4	204.0	179.9	134.5	104.7	97.6	93.0
60°	69.6	78.4	93.3	169.6	161.1	121.0	94.0	83.0	77.4
62.5°	61.0	63.9	82.3	141.9	141.9	108.2	83.4	71.3	68.8
65°	53.2	55.4	70.6	117.5	123.5	94.0	73.8	61.7	59.6



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	46.5	48.3	53.9	97.9	106.5	82.0	61.0	53.9	51.5
70°	39.7	41.2	46.1	79.8	90.8	69.9	51.5	46.1	44.4
72.5°	33.7	35.1	38.0	60.0	74.5	58.2	43.3	39.4	38.0
75°	28.0	28.7	31.6	44.7	60.0	46.5	34.8	32.3	31.6
77.5°	22.7	23.1	24.8	31.9	46.5	35.5	28.0	25.9	25.5
80°	17.4	17.7	19.2	23.1	34.1	25.5	20.9	19.9	19.2
82.5°	12.4	12.8	13.5	15.6	23.1	17.4	14.9	14.5	13.5
85°	7.8	7.8	8.5	9.6	13.1	9.9	9.2	8.9	8.5
87.5°	3.5	3.5	3.9	3.9	6.0	4.3	4.3	3.9	3.5
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)