

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: P735907

Luminaire Tested: S122RDR-S290D830-X4F0-XX-UDD-W-W

Issue Date: 1/24/2024

Test Information

Test Method: LM-79-2019
Report Number: P735907
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-S290D830-X4F0-XX-UDD-W-W
Description: DEFINE 2 REGRESSED DIRECT RECESSED WITH WALL WASH OPTIC
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1169.0 lumens
Efficiency: N/A
Efficacy: 93.5 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

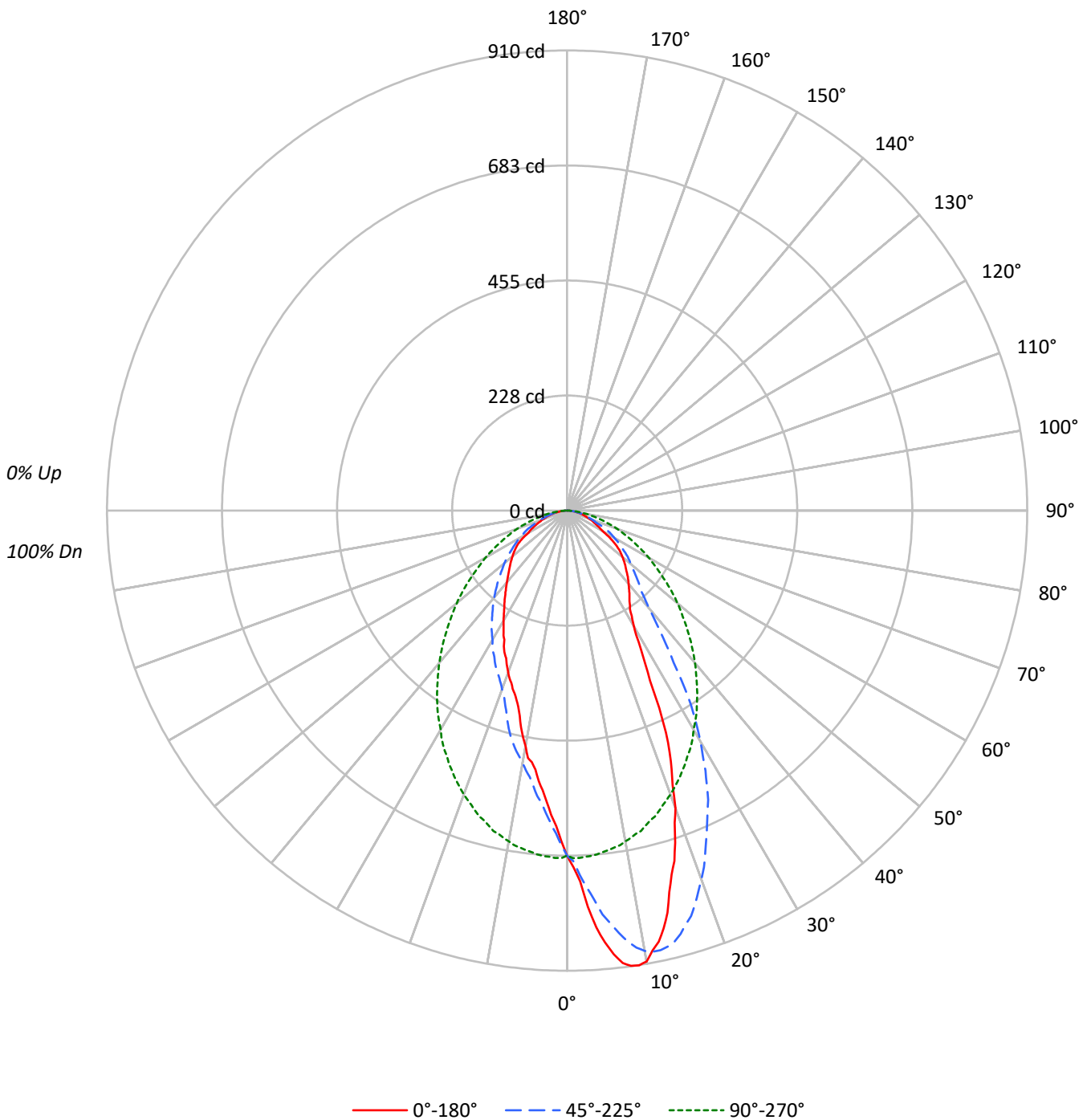
Input Watts (W): 12.5
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P735907

CATALOG NUMBER: S122RDR-S290D830-X4F0-XX-UDD-W-W

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°	13113	13113	13113	13113	13113
5°	16543	15474	13163	11185	10710
10°	17671	17256	12964	9897	9248
15°	15543	17249	12620	8873	7707
20°	12813	15877	12218	7703	6973
25°	9137	13938	11728	7134	6273
30°	5846	11692	11100	6547	5573
35°	5036	8616	10522	6075	5054
40°	4745	6300	9871	5621	4642
45°	4482	5399	9177	5208	4382
50°	4270	4919	8525	4844	4219
55°	3917	4551	7795	4454	4068
60°	3091	4148	7162	4179	3437
65°	2797	3711	6495	3880	3134
70°	2580	2995	5901	3344	2883
75°	2406	2711	5147	2985	2711
80°	2225	2457	4361	2679	2457
85°	1985	2161	3352	2360	2161

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 12847 cd/sqm



TEST NUMBER: P735907

CATALOG NUMBER: S122RDR-S290D830-X4F0-XX-UDD-W-W

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	66.2	5.7
10°-20°	177.8	15.2
20°-30°	223.0	19.1
30°-40°	212.5	18.2
40°-50°	187.5	16.0
50°-60°	147.5	12.6
60°-70°	94.1	8.0
70°-80°	47.8	4.1
80°-90°	12.7	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°	467.0	39.9
0°-40°	679.5	58.1
0°-60°	1014.4	86.8
0°-90°	1169.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1169.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	682	682	682	682	682	
5°	857	802	682	580	555	83
15°	781	867	634	446	387	216
25°	431	657	553	336	296	194
35°	215	367	448	259	215	136
45°	165	199	338	192	161	128
55°	117	136	233	133	121	103
65°	62	82	143	85	69	62
75°	32	36	69	40	36	34
85°	9	10	15	11	10	10
90°	0	0	0	0	0	



TEST NUMBER: P735907

CATALOG NUMBER: S122RDR-S290D830-X4F0-XX-UDD-W-W

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	682.2	682.2	682.2	682.2	682.2	682.2	682.2	682.2	682.2
1°	705.2	708.5	693.3	695.0	687.6	674.4	661.7	663.0	653.9
2°	733.5	742.1	721.2	708.5	687.2	664.2	638.7	635.5	624.4
3°	784.8	780.7	746.2	720.4	685.5	651.1	619.1	611.7	602.2
4°	826.2	813.9	771.7	735.6	684.7	635.9	599.8	587.1	577.6
5°	857.4	841.8	802.0	747.1	682.2	627.3	579.7	565.3	555.1
6°	882.4	870.5	821.7	757.7	679.0	614.5	567.8	548.5	537.8
7°	901.7	891.9	841.8	772.1	676.1	601.8	548.9	528.8	516.1
8°	909.1	904.6	860.3	782.3	672.8	592.8	532.1	514.0	502.5
9°	910.3	910.7	875.0	792.2	669.9	576.4	520.2	501.7	495.6
10°	905.4	909.1	884.1	803.3	664.2	568.2	507.1	489.4	473.8
11°	886.1	902.5	888.6	810.6	659.3	555.1	495.6	472.6	457.0
12°	871.8	887.4	889.0	820.1	653.5	548.9	485.7	455.0	438.5
13°	848.0	864.4	884.9	822.5	650.2	533.7	473.4	436.9	416.8
14°	819.7	845.9	878.3	827.9	642.0	520.6	461.1	411.5	399.6
15°	781.1	818.4	866.8	829.9	634.2	511.6	445.9	398.8	387.3
16°	749.1	791.4	851.3	829.9	629.3	499.3	429.5	387.7	376.2
17°	724.9	759.4	838.5	830.3	621.1	490.6	413.1	377.4	368.4
18°	690.8	729.4	818.4	828.7	612.5	480.4	399.2	368.8	357.7
19°	653.1	699.1	797.1	825.8	605.1	469.7	384.4	359.8	350.3
20°	626.4	668.7	776.2	821.3	597.3	462.8	376.6	349.5	340.9
21°	581.7	633.4	755.3	815.2	589.1	450.9	365.9	340.5	331.1
22.5°	536.2	583.8	716.7	804.9	575.6	436.1	354.0	329.4	315.5
23°	518.5	571.9	704.8	802.0	571.1	432.4	350.3	324.5	312.2
24°	480.8	536.2	680.2	793.0	561.2	420.1	343.4	314.7	306.0
25°	430.8	505.8	657.2	783.6	553.0	411.1	336.4	306.9	295.8
26°	374.1	464.4	636.3	772.1	541.5	398.8	327.0	299.5	283.9
27°	339.3	428.7	608.0	759.8	533.3	389.7	319.2	288.4	277.3
28°	311.4	372.5	582.5	747.9	523.5	378.7	313.8	280.6	267.5
29°	281.0	341.7	552.6	731.9	512.8	365.9	305.2	272.8	258.9
30°	263.4	308.9	526.8	720.0	500.1	357.3	295.0	265.0	251.1
32.5°	231.4	254.8	456.6	685.9	475.9	332.7	278.1	243.7	231.8
35°	214.6	226.9	367.2	646.1	448.4	312.2	258.9	226.0	215.4
37.5°	201.8	209.2	303.2	603.5	420.5	294.1	241.2	209.6	199.4
40°	189.1	194.9	251.1	562.4	393.4	276.5	224.0	192.8	185.0
42.5°	177.6	182.1	217.8	521.8	365.5	258.5	207.2	179.7	172.7
45°	164.9	169.0	198.6	472.6	337.6	240.0	191.6	165.3	161.2
47.5°	154.3	157.1	180.1	428.7	310.1	222.4	175.6	153.8	151.0
50°	142.8	146.5	164.5	379.9	285.1	205.1	162.0	143.6	141.1
52.5°	131.7	133.3	151.4	331.1	258.9	188.3	147.7	133.3	131.7
55°	116.9	123.5	135.8	281.0	232.6	172.7	132.9	122.7	121.4
57.5°	100.1	108.7	121.8	235.9	208.0	155.5	121.0	112.8	107.5
60°	80.4	90.7	107.9	196.1	186.3	139.9	108.7	96.0	89.4
62.5°	70.6	73.8	95.2	164.1	164.1	125.1	96.4	82.5	79.6
65°	61.5	64.0	81.6	135.8	142.8	108.7	85.3	71.4	68.9



TEST NUMBER: P735907

CATALOG NUMBER: S122RDR-S290D830-X4F0-XX-UDD-W-W

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	53.7	55.8	62.4	113.2	123.1	94.8	70.6	62.4	59.5
70°	45.9	47.6	53.3	92.3	105.0	80.8	59.5	53.3	51.3
72.5°	39.0	40.6	43.9	69.3	86.2	67.3	50.0	45.5	43.9
75°	32.4	33.2	36.5	51.7	69.3	53.7	40.2	37.3	36.5
77.5°	26.3	26.7	28.7	36.9	53.7	41.0	32.4	29.9	29.5
80°	20.1	20.5	22.2	26.7	39.4	29.5	24.2	23.0	22.2
82.5°	14.4	14.8	15.6	18.1	26.7	20.1	17.2	16.8	15.6
85°	9.0	9.0	9.8	11.1	15.2	11.5	10.7	10.3	9.8
87.5°	4.1	4.1	4.5	4.5	7.0	4.9	4.9	4.5	4.1
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)