

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: P735867

Luminaire Tested: S122DR-S290D930-X4F0-XX-UDD-W-W

Issue Date: 1/24/2024

Test Information

Test Method: LM-79-2019
Report Number: P735867
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2308-143-1)
Test Lab: INNOVATION CENTER
Issue Date: 1/24/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S122DR-S290D930-X4F0-XX-UDD-W-W
Description: DEFINE 2 DIRECT RECESSED WITH WALL WASH OPTIC
Light Source: 3000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1050.5 lumens
Efficiency: N/A
Efficacy: 84.0 lumens/watt
Spacing Criteria (0/90/45): 0.9 / 1.11 / 1.12
Luminous Opening: Rectangular (W 4' x L: 0.14' x H: 0')
CIE Type: Direct

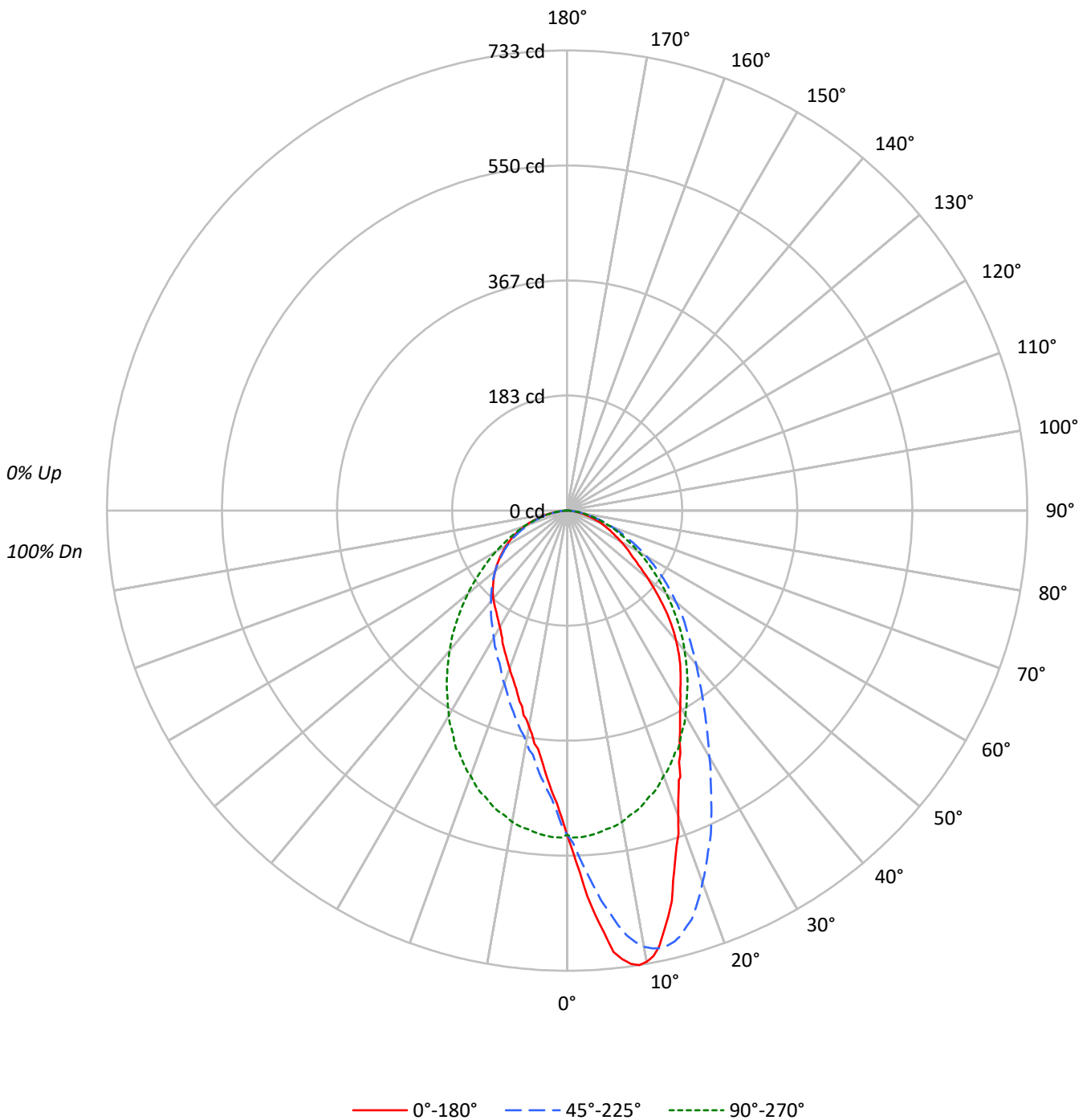
Input Watts (W): 12.5
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P735867

CATALOG NUMBER: S122DR-S290D930-X4F0-XX-UDD-W-W

Luminous Intensity Polar Plot



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CATALOG NUMBER: S122DR-S290D930-X4F0-XX-UDD-W-W

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	102	98	107	103	100	97	99	96	94	95	93	91	92	90	88				86	
2	101	94	87	82	98	92	86	81	88	83	79	85	81	78	82	79	76				74	
3	93	83	76	70	91	82	75	69	79	73	68	76	71	67	74	69	66				64	
4	86	75	67	60	83	73	66	60	71	64	59	69	63	58	67	62	58				56	
5	79	67	59	53	77	66	58	53	64	57	52	62	56	52	61	55	51				49	
6	74	61	53	47	72	60	52	47	59	52	46	57	51	46	55	50	46				44	
7	69	56	48	42	67	55	47	42	54	47	42	52	46	41	51	45	41				39	
8	64	51	43	38	63	51	43	38	50	43	38	48	42	37	47	41	37				35	
9	60	48	40	35	59	47	40	34	46	39	34	45	39	34	44	38	34				32	
10	57	44	37	32	55	44	36	32	43	36	31	42	36	31	41	35	31				30	

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	9924	9924	9924	9924	9924
5°	13016	12030	9975	8366	7984
10°	14246	13770	9827	7313	6816
15°	12817	13945	9562	6603	6045
20°	10575	12899	9197	5989	5480
25°	9039	11508	8874	5540	5079
30°	7995	10050	8365	5191	4756
35°	7394	8900	7844	4946	4620
40°	6767	8032	7302	4737	4594
45°	5961	7331	6752	4591	4534
50°	5018	6758	6187	4468	4479
55°	4222	6220	5590	4316	4400
60°	3806	5620	5074	4186	4309
65°	3452	4939	4521	3989	4230
70°	3113	4266	4069	3687	4007
75°	2718	3609	3476	3349	3661
80°	2280	2823	2823	2911	3066
85°	1720	2029	2117	2272	2183

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 10764 cd/sqm

TEST NUMBER: P735867

CATALOG NUMBER: S122DR-S290D930-X4F0-XX-UDD-W-W

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	50.8	4.8
10°-20°	139.5	13.3
20°-30°	182.9	17.4
30°-40°	193.3	18.4
40°-50°	179.5	17.1
50°-60°	143.6	13.7
60°-70°	98.2	9.4
70°-80°	50.7	4.8
80°-90°	12.0	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°	373.2	35.5
0°-40°	566.5	53.9
0°-60°	889.6	84.7
0°-90°	1050.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1050.5	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	516	516	516	516	516	
5°	675	624	517	434	414	66
15°	644	701	480	332	304	177
25°	426	543	418	261	240	196
35°	315	379	334	211	197	197
45°	219	270	248	169	167	168
55°	126	186	167	129	131	115
65°	76	109	99	88	93	75
75°	37	49	47	45	49	39
85°	8	9	10	10	10	9
90°	0	0	0	0	0	



TEST NUMBER: P735867

CATALOG NUMBER: S122DR-S290D930-X4F0-XX-UDD-W-W

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	516.3	516.3	516.3	516.3	516.3	516.3	516.3	516.3	516.3
1°	544.7	541.9	529.4	530.2	520.9	510.6	501.1	495.0	490.1
2°	576.6	571.0	551.5	541.9	520.9	498.9	479.1	473.7	467.0
3°	615.3	601.8	574.9	552.2	520.2	488.3	461.0	451.4	450.3
4°	646.6	634.5	598.6	562.8	518.4	478.0	447.1	436.8	431.9
5°	674.6	666.8	623.5	576.3	517.0	468.1	433.6	419.4	413.8
6°	706.9	690.9	643.4	589.8	514.5	458.5	421.6	404.5	396.7
7°	720.0	710.1	665.7	598.6	511.4	447.5	406.3	387.9	382.2
8°	729.2	725.3	683.5	613.2	509.9	437.2	392.8	381.5	374.7
9°	733.1	729.9	696.2	619.2	507.4	431.9	386.1	367.3	359.8
10°	729.9	731.4	705.5	628.5	503.5	420.9	374.7	358.4	349.2
11°	722.5	726.0	710.4	639.1	498.6	412.0	364.4	347.8	338.9
12°	708.3	716.1	712.6	646.6	494.0	404.2	357.3	341.4	333.6
13°	686.3	703.7	711.1	649.7	491.1	395.3	348.5	330.0	320.1
14°	666.4	684.5	707.2	656.8	486.2	385.4	340.3	321.9	313.3
15°	644.1	665.0	700.8	659.0	480.5	377.2	331.8	311.6	303.8
16°	612.8	640.9	689.1	661.5	473.7	368.0	324.0	304.8	294.5
17°	586.9	617.1	680.3	662.9	470.2	360.9	317.2	294.5	287.8
18°	563.2	597.2	664.3	661.8	464.5	352.7	307.3	287.1	280.7
19°	544.4	572.0	648.3	659.3	456.7	344.9	299.9	281.8	274.3
20°	517.0	549.0	630.6	658.3	449.6	337.8	292.8	274.3	267.9
21°	494.3	527.0	614.3	654.7	444.6	331.1	287.4	267.2	261.5
22.5°	464.5	493.3	586.9	648.0	433.6	319.7	275.7	260.5	252.7
23°	461.0	485.4	579.8	645.8	430.4	317.2	271.8	256.6	250.2
24°	438.6	464.5	563.2	639.1	422.3	309.4	265.4	251.9	244.5
25°	426.2	447.5	542.6	632.7	418.4	302.3	261.2	245.9	239.5
26°	408.8	433.3	524.1	623.5	409.9	296.0	254.4	240.6	234.6
27°	396.0	416.6	505.0	616.7	399.9	289.2	249.1	235.3	227.8
28°	383.6	403.5	486.5	605.7	392.8	281.8	245.2	230.7	223.6
29°	370.8	388.2	471.6	597.2	386.1	275.4	239.2	224.6	217.9
30°	360.2	376.2	452.8	585.9	376.9	267.9	233.9	220.4	214.3
32.5°	335.7	349.2	414.5	558.9	354.9	253.0	221.1	208.7	205.1
35°	315.1	324.0	379.3	528.7	334.3	237.0	210.8	198.7	196.9
37.5°	293.5	302.0	347.4	497.2	312.6	222.5	199.1	191.3	189.8
40°	269.7	281.0	320.1	465.9	291.0	208.3	188.8	182.8	183.1
42.5°	245.9	259.0	293.5	429.4	270.8	194.8	178.8	174.6	175.3
45°	219.3	236.0	269.7	396.0	248.4	182.0	168.9	166.8	166.8
47.5°	191.6	212.9	249.1	361.6	227.1	169.3	159.3	157.9	158.6
50°	167.8	187.0	226.0	328.2	206.9	157.6	149.4	149.0	149.8
52.5°	144.4	163.6	205.8	297.0	186.3	146.9	139.8	139.8	140.5
55°	126.0	140.9	185.6	264.4	166.8	134.5	128.8	129.9	131.3
57.5°	113.2	123.1	165.7	233.1	148.7	122.4	118.9	119.6	121.4
60°	99.0	106.8	146.2	204.4	132.0	110.7	108.9	110.4	112.1
62.5°	86.2	93.0	127.7	178.5	113.9	99.4	98.7	100.8	102.6
65°	75.9	80.6	108.6	152.2	99.4	88.0	87.7	90.8	93.0



TEST NUMBER: P735867

CATALOG NUMBER: S122DR-S290D930-X4F0-XX-UDD-W-W

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	65.3	68.8	91.9	127.4	84.8	76.6	76.6	80.2	82.0
70°	55.4	58.2	75.9	105.0	72.4	65.3	65.6	69.9	71.3
72.5°	45.1	47.6	61.7	84.5	58.6	54.6	55.7	59.3	60.7
75°	36.6	38.3	48.6	66.7	46.8	43.6	45.1	48.3	49.3
77.5°	28.0	29.5	35.8	49.0	35.8	34.1	35.5	38.3	38.3
80°	20.6	20.9	25.5	34.4	25.5	24.5	26.3	27.7	27.7
82.5°	13.5	14.2	16.7	22.0	17.0	16.7	17.4	18.5	18.5
85°	7.8	8.2	9.2	12.1	9.6	9.6	10.3	10.3	9.9
87.5°	3.2	3.5	3.9	4.6	4.3	4.6	4.6	3.9	4.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)