

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: P735868

Luminaire Tested: S122DR-S290D935-X4F0-XX-UDD-W-W

Issue Date: 1/24/2024

Test Information

Test Method: LM-79-2019
Report Number: P735868
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-S290D935-X4F0-XX-UDD-W-W
Description: DEFINE 2 DIRECT RECESSED WITH WALL WASH OPTIC
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1109.4 lumens
Efficiency: N/A
Efficacy: 88.8 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

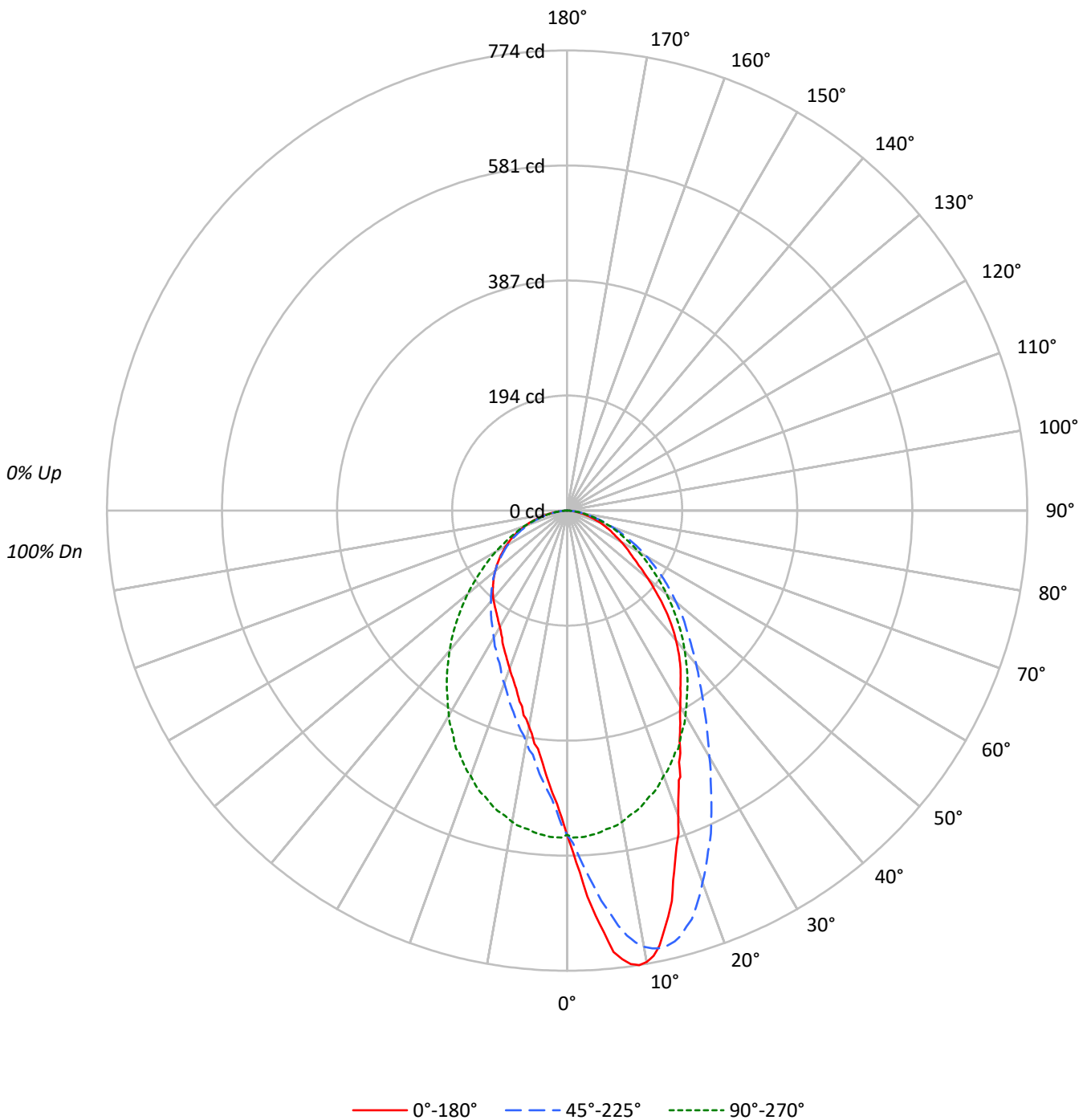
Input Watts (W): 12.5
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	10481	10481	10481	10481	10481
5°	13746	12704	10535	8835	8432
10°	15046	14541	10380	7723	7198
15°	13536	14727	10097	6973	6384
20°	11168	13621	9712	6325	5787
25°	9546	12152	9370	5849	5366
30°	8443	10614	8834	5482	5023
35°	7809	9400	8283	5223	4881
40°	7146	8481	7711	5003	4853
45°	6296	7742	7130	4849	4787
50°	5302	7138	6534	4719	4728
55°	4457	6568	5901	4558	4648
60°	4021	5936	5359	4421	4552
65°	3648	5217	4771	4212	4466
70°	3288	4507	4294	3895	4232
75°	2867	3810	3676	3535	3869
80°	2402	2989	2989	3066	3232
85°	1808	2139	2227	2404	2316

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 11368 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	53.7	4.8
10°-20°	147.3	13.3
20°-30°	193.1	17.4
30°-40°	204.1	18.4
40°-50°	189.5	17.1
50°-60°	151.7	13.7
60°-70°	103.7	9.4
70°-80°	53.5	4.8
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°	394.1	35.5
0°-40°	598.2	53.9
0°-60°	939.4	84.7
0°-90°	1109.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1109.4	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	545	545	545	545	545	
5°	712	658	546	458	437	70
15°	680	740	507	350	321	187
25°	450	573	442	276	253	207
35°	333	401	353	223	208	208
45°	232	285	262	178	176	178
55°	133	196	176	136	139	122
65°	80	115	105	93	98	80
75°	39	51	50	48	52	41
85°	8	10	10	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°	545.3	545.3	545.3	545.3	545.3	545.3	545.3	545.3	545.3
1°	575.2	572.2	559.1	559.9	550.1	539.3	529.1	522.8	517.5
2°	609.0	603.0	582.4	572.2	550.1	526.9	505.9	500.3	493.2
3°	649.8	635.6	607.1	583.1	549.4	515.7	486.8	476.7	475.6
4°	682.8	670.1	632.2	594.4	547.5	504.8	472.2	461.3	456.1
5°	712.4	704.2	658.4	608.6	546.0	494.3	457.9	443.0	437.0
6°	746.5	729.6	679.4	622.8	543.4	484.2	445.2	427.2	419.0
7°	760.4	749.9	703.0	632.2	540.0	472.6	429.1	409.6	403.6
8°	770.1	766.0	721.8	647.6	538.5	461.7	414.8	402.9	395.7
9°	774.2	770.9	735.3	653.9	535.9	456.1	407.7	387.9	380.0
10°	770.9	772.4	745.0	663.7	531.8	444.5	395.7	378.5	368.8
11°	763.0	766.7	750.2	674.9	526.5	435.1	384.9	367.3	357.9
12°	748.0	756.2	752.5	682.8	521.7	426.8	377.4	360.5	352.3
13°	724.8	743.1	751.0	686.2	518.7	417.5	368.0	348.5	338.0
14°	703.8	722.9	746.9	693.7	513.4	407.0	359.4	339.9	330.9
15°	680.2	702.3	740.1	695.9	507.4	398.4	350.4	329.0	320.8
16°	647.2	676.8	727.8	698.5	500.3	388.6	342.1	321.9	311.0
17°	619.8	651.7	718.4	700.0	496.5	381.1	335.0	311.0	303.9
18°	594.7	630.7	701.5	698.9	490.5	372.5	324.5	303.2	296.4
19°	574.9	604.1	684.7	696.3	482.3	364.3	316.7	297.6	289.7
20°	546.0	579.7	665.9	695.2	474.8	356.8	309.2	289.7	282.9
21°	522.0	556.5	648.7	691.4	469.6	349.6	303.5	282.2	276.2
22.5°	490.5	520.9	619.8	684.3	457.9	337.6	291.2	275.1	266.8
23°	486.8	512.7	612.3	682.0	454.6	335.0	287.1	270.9	264.2
24°	463.2	490.5	594.7	674.9	446.0	326.8	280.3	266.1	258.2
25°	450.1	472.6	573.0	668.2	441.8	319.3	275.8	259.7	253.0
26°	431.7	457.6	553.5	658.4	432.8	312.5	268.7	254.1	247.7
27°	418.2	440.0	533.3	651.3	422.3	305.4	263.1	248.5	240.6
28°	405.1	426.1	513.8	639.7	414.8	297.6	259.0	243.6	236.1
29°	391.6	410.0	498.0	630.7	407.7	290.8	252.6	237.2	230.1
30°	380.4	397.2	478.2	618.7	398.0	282.9	247.0	232.7	226.3
32.5°	354.5	368.8	437.7	590.2	374.7	267.2	233.5	220.4	216.6
35°	332.8	342.1	400.6	558.4	353.0	250.3	222.6	209.9	208.0
37.5°	309.9	318.9	366.9	525.0	330.2	235.0	210.2	202.0	200.5
40°	284.8	296.8	338.0	492.0	307.3	220.0	199.4	193.0	193.4
42.5°	259.7	273.6	309.9	453.4	285.9	205.7	188.9	184.4	185.1
45°	231.6	249.2	284.8	418.2	262.3	192.2	178.4	176.1	176.1
47.5°	202.4	224.8	263.1	381.9	239.8	178.8	168.3	166.8	167.5
50°	177.3	197.5	238.7	346.6	218.5	166.4	157.8	157.4	158.1
52.5°	152.5	172.8	217.4	313.7	196.7	155.1	147.7	147.7	148.4
55°	133.0	148.8	196.0	279.2	176.1	142.0	136.0	137.2	138.7
57.5°	119.5	130.0	175.0	246.2	157.0	129.3	125.5	126.3	128.2
60°	104.6	112.8	154.4	215.9	139.4	116.9	115.0	116.5	118.4
62.5°	91.1	98.2	134.9	188.5	120.3	104.9	104.2	106.4	108.3
65°	80.2	85.1	114.7	160.8	104.9	92.9	92.6	95.9	98.2



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	69.0	72.7	97.1	134.5	89.6	80.9	80.9	84.7	86.6
70°	58.5	61.5	80.2	110.9	76.4	69.0	69.3	73.8	75.3
72.5°	47.6	50.2	65.2	89.2	61.8	57.7	58.8	62.6	64.1
75°	38.6	40.5	51.3	70.5	49.5	46.1	47.6	51.0	52.1
77.5°	29.6	31.1	37.8	51.7	37.8	36.0	37.5	40.5	40.5
80°	21.7	22.1	27.0	36.4	27.0	25.9	27.7	29.2	29.2
82.5°	14.2	15.0	17.6	23.2	18.0	17.6	18.4	19.5	19.5
85°	8.2	8.6	9.7	12.7	10.1	10.1	10.9	10.9	10.5
87.5°	3.4	3.7	4.1	4.9	4.5	4.9	4.9	4.1	4.5
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)