

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: P735865

Luminaire Tested: S122DR-S290D850-X4F0-XX-UDD-W-W

Issue Date: 1/24/2024

Test Information

Test Method: LM-79-2019
Report Number: P735865
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-S290D850-X4F0-XX-UDD-W-W
Description: DEFINE 2 DIRECT RECESSED WITH WALL WASH OPTIC
Light Source: 5000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1429.0 lumens
Efficiency: N/A
Efficacy: 114.3 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

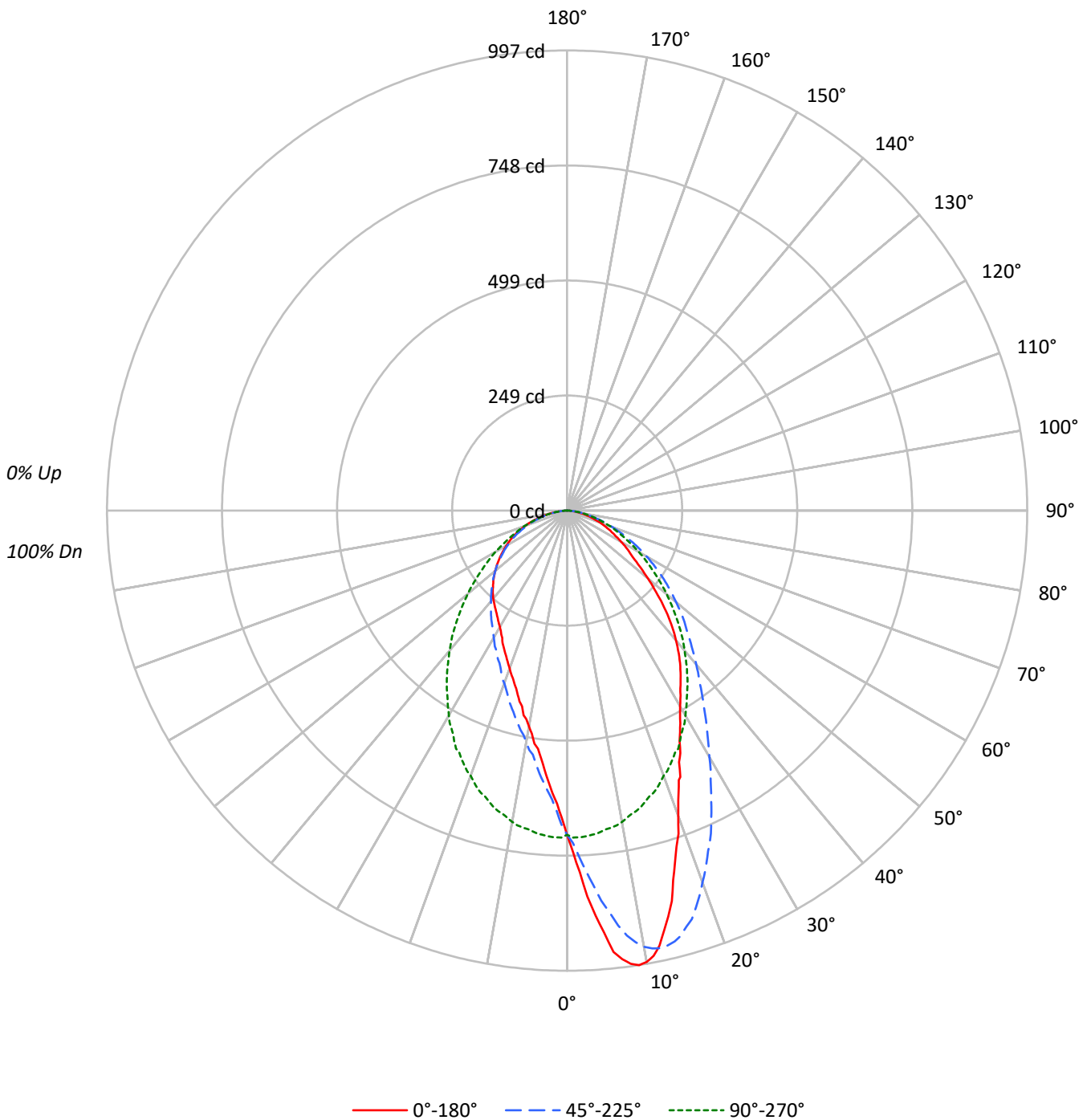
Input Watts (W): 12.5
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P735865

CATALOG NUMBER: S122DR-S290D850-X4F0-XX-UDD-W-W

Luminous Intensity Polar Plot



TEST NUMBER: P735865

CATALOG NUMBER: S122DR-S290D850-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				86
2	101	94	87	82	98	92	86	81	88	83	79	85	81	78	82	79	76	74				74
3	93	83	76	70	91	82	75	69	79	73	68	76	71	67	74	69	66	64				64
4	86	75	67	60	83	73	66	60	71	64	59	69	63	58	67	62	58	56				56
5	79	67	59	53	77	66	58	53	64	57	52	62	56	52	61	55	51	49				49
6	74	61	53	47	72	60	52	47	59	52	46	57	51	46	55	50	46	44				44
7	69	56	48	42	67	55	47	42	54	47	42	52	46	41	51	45	41	39				39
8	64	51	43	38	63	51	43	38	50	43	38	48	42	37	47	41	37	35				35
9	60	48	40	35	59	47	40	34	46	39	34	45	39	34	44	38	34	32				32
10	57	44	37	32	55	44	36	32	43	36	31	42	36	31	41	35	31	30				30

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	13499	13499	13499	13499	13499
5°	17705	16364	13570	11382	10859
10°	19379	18729	13368	9948	9271
15°	17434	18970	13006	8981	8222
20°	14386	17544	12510	8145	7454
25°	12294	15652	12070	7535	6910
30°	10873	13670	11377	7060	6470
35°	10057	12108	10669	6727	6286
40°	9204	10925	9931	6444	6250
45°	8109	9971	9185	6247	6168
50°	6827	9195	8415	6076	6091
55°	5744	8458	7604	5871	5985
60°	5178	7646	6904	5697	5862
65°	4698	6718	6149	5421	5753
70°	4232	5805	5536	5019	5451
75°	3691	4909	4731	4552	4983
80°	3099	3852	3852	3952	4173
85°	2338	2779	2867	3088	2977

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 14643 cd/sqm

TEST NUMBER: P735865

CATALOG NUMBER: S122DR-S290D850-X4F0-XX-UDD-W-W

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	69.1	4.8
10°-20°	189.7	13.3
20°-30°	248.8	17.4
30°-40°	262.9	18.4
40°-50°	244.1	17.1
50°-60°	195.4	13.7
60°-70°	133.6	9.4
70°-80°	69.0	4.8
80°-90°	16.4	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°	507.6	35.5
0°-40°	770.5	53.9
0°-60°	1210.0	84.7
0°-90°	1429.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1429.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	702	702	702	702	702	
5°	918	848	703	590	563	90
15°	876	953	654	451	413	240
25°	580	738	569	355	326	267
35°	429	516	455	287	268	268
45°	298	367	338	230	227	229
55°	171	252	227	175	179	157
65°	103	148	135	119	126	102
75°	50	66	64	61	67	53
85°	11	13	13	14	14	13
90°	0	0	0	0	0	

TEST NUMBER: P735865

CATALOG NUMBER: S122DR-S290D850-X4F0-XX-UDD-W-W

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	702.3	702.3	702.3	702.3	702.3	702.3	702.3	702.3	702.3
1°	740.9	737.1	720.2	721.1	708.6	694.6	681.6	673.4	666.6
2°	784.4	776.7	750.1	737.1	708.6	678.7	651.6	644.4	635.2
3°	837.0	818.6	782.0	751.1	707.6	664.2	627.0	614.0	612.5
4°	879.5	863.1	814.3	765.6	705.2	650.2	608.2	594.2	587.4
5°	917.6	907.0	848.1	783.9	703.3	636.7	589.9	570.5	562.8
6°	961.5	939.8	875.1	802.2	699.9	623.6	573.4	550.3	539.7
7°	979.4	965.9	905.5	814.3	695.6	608.7	552.7	527.6	519.9
8°	991.9	986.6	929.7	834.1	693.6	594.7	534.3	518.9	509.7
9°	997.2	992.9	947.0	842.3	690.3	587.4	525.2	499.6	489.5
10°	992.9	994.8	959.6	854.8	684.9	572.5	509.7	487.5	475.0
11°	982.8	987.6	966.4	869.3	678.2	560.4	495.7	473.0	461.0
12°	963.5	974.1	969.2	879.5	671.9	549.8	486.1	464.4	453.7
13°	933.5	957.2	967.3	883.8	668.0	537.7	474.0	448.9	435.4
14°	906.5	931.1	962.0	893.5	661.3	524.2	462.9	437.8	426.2
15°	876.1	904.6	953.3	896.4	653.6	513.1	451.3	423.8	413.2
16°	833.6	871.7	937.4	899.7	644.4	500.6	440.7	414.6	400.6
17°	798.4	839.4	925.3	901.7	639.6	490.9	431.5	400.6	391.5
18°	766.0	812.4	903.6	900.2	631.8	479.8	418.0	390.5	381.8
19°	740.5	778.1	881.9	896.8	621.2	469.2	407.9	383.3	373.1
20°	703.3	746.7	857.7	895.4	611.6	459.5	398.2	373.1	364.4
21°	672.4	716.8	835.5	890.6	604.8	450.4	391.0	363.5	355.7
22.5°	631.8	670.9	798.4	881.4	589.9	434.9	375.1	354.3	343.7
23°	627.0	660.3	788.7	878.5	585.5	431.5	369.7	349.0	340.3
24°	596.6	631.8	766.0	869.3	574.4	420.9	361.1	342.7	332.6
25°	579.7	608.7	738.0	860.6	569.1	411.3	355.3	334.5	325.8
26°	556.1	589.4	712.9	848.1	557.5	402.6	346.1	327.3	319.1
27°	538.7	566.7	686.9	838.9	544.0	393.4	338.9	320.0	309.9
28°	521.8	548.8	661.8	824.0	534.3	383.3	333.5	313.8	304.1
29°	504.4	528.1	641.5	812.4	525.2	374.6	325.3	305.5	296.4
30°	489.9	511.7	615.9	796.9	512.6	364.4	318.1	299.8	291.5
32.5°	456.6	475.0	563.8	760.2	482.7	344.2	300.7	283.8	279.0
35°	428.6	440.7	516.0	719.2	454.7	322.4	286.7	270.3	267.9
37.5°	399.2	410.8	472.6	676.3	425.3	302.6	270.8	260.2	258.2
40°	366.8	382.3	435.4	633.8	395.8	283.3	256.8	248.6	249.1
42.5°	334.5	352.4	399.2	584.1	368.3	265.0	243.3	237.5	238.5
45°	298.3	321.0	366.8	538.7	337.9	247.6	229.8	226.9	226.9
47.5°	260.7	289.6	338.9	491.9	308.9	230.2	216.7	214.8	215.8
50°	228.3	254.4	307.5	446.5	281.4	214.3	203.2	202.7	203.7
52.5°	196.5	222.5	280.0	404.0	253.4	199.8	190.2	190.2	191.1
55°	171.4	191.6	252.4	359.6	226.9	182.9	175.2	176.7	178.6
57.5°	154.0	167.5	225.4	317.1	202.2	166.5	161.7	162.7	165.1
60°	134.7	145.3	198.9	278.0	179.6	150.6	148.2	150.1	152.5
62.5°	117.3	126.5	173.8	242.8	154.9	135.2	134.2	137.1	139.5
65°	103.3	109.6	147.7	207.1	135.2	119.7	119.2	123.6	126.5



TEST NUMBER: P735865

CATALOG NUMBER: S122DR-S290D850-X4F0-XX-UDD-W-W

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	88.8	93.6	125.0	173.3	115.4	104.3	104.3	109.1	111.5
70°	75.3	79.2	103.3	142.9	98.5	88.8	89.3	95.1	97.0
72.5°	61.3	64.7	84.0	114.9	79.6	74.3	75.8	80.6	82.5
75°	49.7	52.1	66.1	90.7	63.7	59.4	61.3	65.6	67.1
77.5°	38.1	40.1	48.8	66.6	48.8	46.3	48.3	52.1	52.1
80°	28.0	28.5	34.8	46.8	34.8	33.3	35.7	37.7	37.7
82.5°	18.3	19.3	22.7	29.9	23.2	22.7	23.7	25.1	25.1
85°	10.6	11.1	12.6	16.4	13.0	13.0	14.0	14.0	13.5
87.5°	4.3	4.8	5.3	6.3	5.8	6.3	6.3	5.3	5.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)