

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: P735910

Luminaire Tested: S122RDR-S290D850-X4F0-XX-UDD-W-W

Issue Date: 1/24/2024

Test Information

Test Method: LM-79-2019
Report Number: P735910
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-S290D850-X4F0-XX-UDD-W-W
Description: DEFINE 2 REGRESSED DIRECT RECESSED WITH WALL WASH OPTIC
Light Source: 5000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1375.4 lumens
Efficiency: N/A
Efficacy: 110.0 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

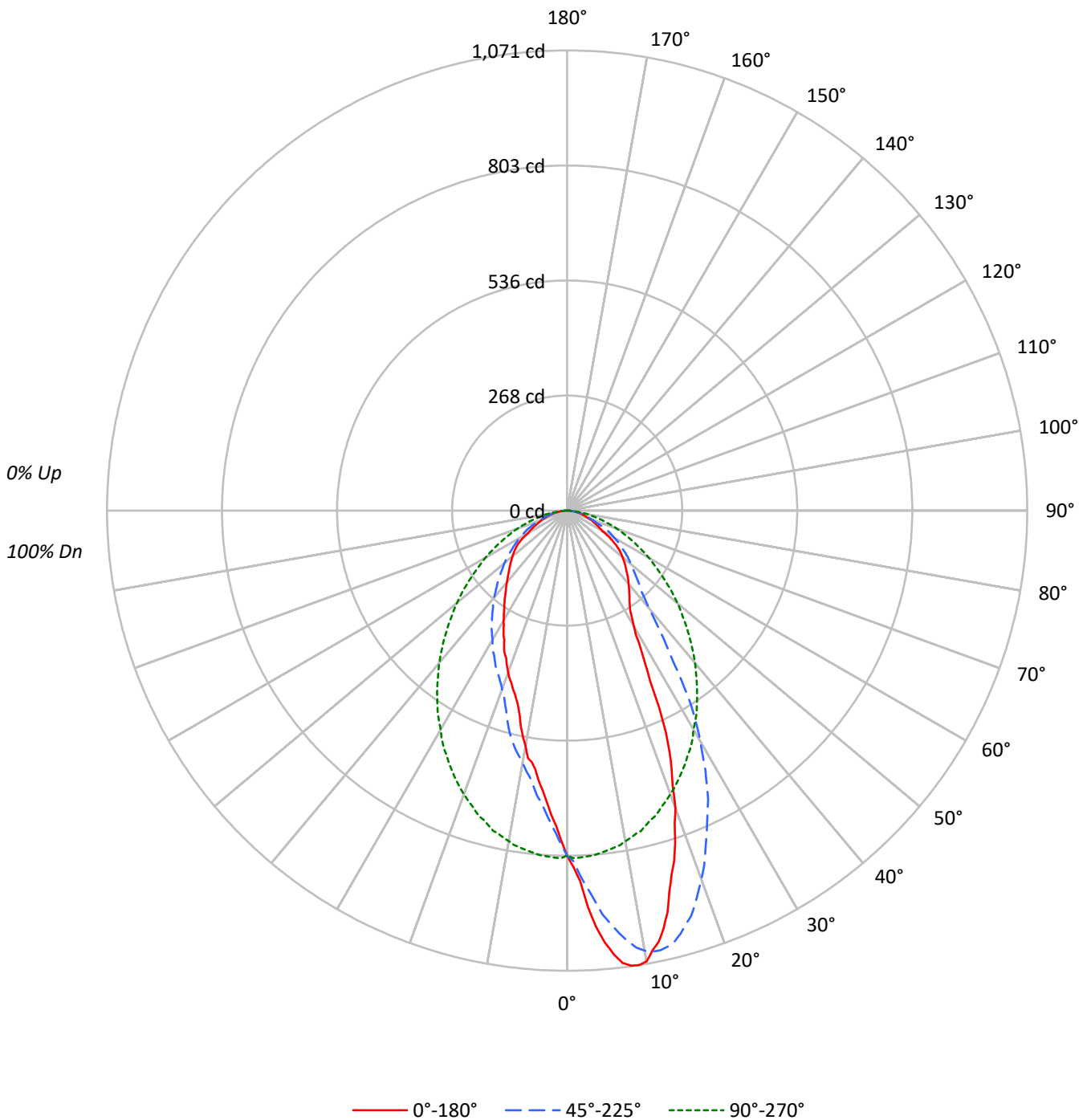
Input Watts (W): 12.5
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	15429	15429	15429	15429	15429
5°	19464	18208	15488	13159	12601
10°	20792	20302	15253	11644	10881
15°	18287	20295	14849	10441	9068
20°	15077	18681	14376	9064	8204
25°	10748	16400	13800	8394	7380
30°	6878	13756	13059	7704	6556
35°	5923	10137	12380	7147	5946
40°	5583	7412	11615	6614	5462
45°	5274	6350	10800	6127	5157
50°	5024	5789	10032	5703	4964
55°	4611	5355	9172	5241	4789
60°	3637	4878	8423	4917	4044
65°	3293	4371	7641	4566	3689
70°	3040	3529	6946	3934	3389
75°	2830	3193	6060	3513	3193
80°	2623	2889	5125	3155	2889
85°	2338	2558	3948	2779	2558

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 15116 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	77.8	5.7
10°-20°	209.2	15.2
20°-30°	262.4	19.1
30°-40°	250.0	18.2
40°-50°	220.6	16.0
50°-60°	173.5	12.6
60°-70°	110.7	8.0
70°-80°	56.3	4.1
80°-90°	14.9	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°	549.4	39.9
0°-40°	799.5	58.1
0°-60°	1193.5	86.8
0°-90°	1375.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1375.4	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	803	803	803	803	803	
5°	1009	944	803	682	653	98
15°	919	1020	746	525	456	255
25°	507	773	651	396	348	228
35°	252	432	528	305	253	161
45°	194	234	397	225	190	150
55°	138	160	274	156	143	121
65°	72	96	168	100	81	72
75°	38	43	82	47	43	41
85°	11	12	18	13	12	12
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°	802.7	802.7	802.7	802.7	802.7	802.7	802.7	802.7	802.7
1°	829.7	833.6	815.8	817.7	809.0	793.5	778.6	780.0	769.4
2°	863.1	873.2	848.6	833.6	808.5	781.5	751.6	747.7	734.7
3°	923.4	918.6	878.0	847.6	806.6	766.0	728.4	719.7	708.6
4°	972.1	957.7	907.9	865.5	805.6	748.2	705.7	690.7	679.6
5°	1008.8	990.5	943.7	879.0	802.7	738.0	682.0	665.2	653.1
6°	1038.3	1024.3	966.8	891.5	798.9	723.1	668.0	645.4	632.8
7°	1061.0	1049.4	990.5	908.4	795.5	708.1	645.8	622.2	607.2
8°	1069.6	1064.3	1012.2	920.5	791.6	697.5	626.1	604.8	591.3
9°	1071.1	1071.6	1029.6	932.1	788.2	678.2	612.1	590.3	583.1
10°	1065.3	1069.6	1040.2	945.1	781.5	668.5	596.6	575.9	557.5
11°	1042.6	1061.9	1045.5	953.8	775.7	653.1	583.1	556.1	537.7
12°	1025.7	1044.1	1046.0	964.9	768.9	645.8	571.5	535.3	516.0
13°	997.7	1017.0	1041.2	967.8	765.1	628.0	557.0	514.1	490.4
14°	964.4	995.3	1033.4	974.1	755.4	612.5	542.5	484.1	470.1
15°	919.0	963.0	1019.9	976.5	746.2	601.9	524.7	469.2	455.7
16°	881.4	931.1	1001.6	976.5	740.5	587.4	505.4	456.1	442.6
17°	852.9	893.5	986.6	977.0	730.8	577.3	486.1	444.1	433.5
18°	812.9	858.2	963.0	975.0	720.7	565.2	469.7	433.9	420.9
19°	768.4	822.5	937.9	971.7	712.0	552.7	452.3	423.3	412.2
20°	737.1	786.8	913.3	966.4	702.8	544.5	443.1	411.3	401.1
21°	684.5	745.3	888.6	959.1	693.1	530.5	430.6	400.6	389.5
22.5°	630.9	686.9	843.3	947.0	677.2	513.1	416.6	387.6	371.2
23°	610.1	672.9	829.3	943.7	671.9	508.8	412.2	381.8	367.3
24°	565.7	630.9	800.3	933.0	660.3	494.3	404.0	370.2	360.1
25°	506.8	595.2	773.3	921.9	650.7	483.7	395.8	361.1	348.0
26°	440.2	546.4	748.7	908.4	637.2	469.2	384.7	352.4	334.0
27°	399.2	504.4	715.4	893.9	627.5	458.6	375.5	339.3	326.3
28°	366.4	438.3	685.4	879.9	615.9	445.5	369.3	330.2	314.7
29°	330.6	402.1	650.2	861.1	603.4	430.6	359.1	321.0	304.6
30°	309.9	363.5	619.8	847.1	588.4	420.4	347.1	311.8	295.4
32.5°	272.2	299.8	537.2	807.1	559.9	391.5	327.3	286.7	272.7
35°	252.4	266.9	432.0	760.2	527.6	367.3	304.6	266.0	253.4
37.5°	237.5	246.2	356.7	710.0	494.8	346.1	283.8	246.7	234.6
40°	222.5	229.3	295.4	661.8	462.9	325.3	263.6	226.9	217.7
42.5°	209.0	214.3	256.3	614.0	430.1	304.1	243.8	211.4	203.2
45°	194.0	198.9	233.6	556.1	397.3	282.4	225.4	194.5	189.7
47.5°	181.5	184.9	211.9	504.4	364.9	261.6	206.6	181.0	177.6
50°	168.0	172.3	193.6	447.0	335.5	241.3	190.7	168.9	166.0
52.5°	154.9	156.9	178.1	389.5	304.6	221.6	173.8	156.9	154.9
55°	137.6	145.3	159.8	330.6	273.7	203.2	156.4	144.3	142.9
57.5°	117.8	127.9	143.4	277.5	244.7	182.9	142.4	132.7	126.5
60°	94.6	106.7	126.9	230.7	219.1	164.6	127.9	113.0	105.2
62.5°	83.0	86.9	112.0	193.1	193.1	147.2	113.4	97.0	93.6
65°	72.4	75.3	96.1	159.8	168.0	127.9	100.4	84.0	81.1



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	63.2	65.6	73.4	133.2	144.8	111.5	83.0	73.4	70.0
70°	54.1	56.0	62.8	108.6	123.6	95.1	70.0	62.8	60.3
72.5°	45.9	47.8	51.6	81.6	101.4	79.2	58.9	53.6	51.6
75°	38.1	39.1	43.0	60.8	81.6	63.2	47.3	43.9	43.0
77.5°	30.9	31.4	33.8	43.4	63.2	48.3	38.1	35.2	34.8
80°	23.7	24.1	26.1	31.4	46.3	34.8	28.5	27.0	26.1
82.5°	16.9	17.4	18.3	21.2	31.4	23.7	20.3	19.8	18.3
85°	10.6	10.6	11.6	13.0	17.9	13.5	12.6	12.1	11.6
87.5°	4.8	4.8	5.3	5.3	8.2	5.8	5.8	5.3	4.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)