

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: P735908

Luminaire Tested: S122RDR-S290D835-X4F0-XX-UDD-W-W

Issue Date: 1/24/2024

Test Information

Test Method: LM-79-2019
Report Number: P735908
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-S290D835-X4F0-XX-UDD-W-W
Description: DEFINE 2 REGRESSED DIRECT RECESSED WITH WALL WASH OPTIC
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1240.2 lumens
Efficiency: N/A
Efficacy: 99.2 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

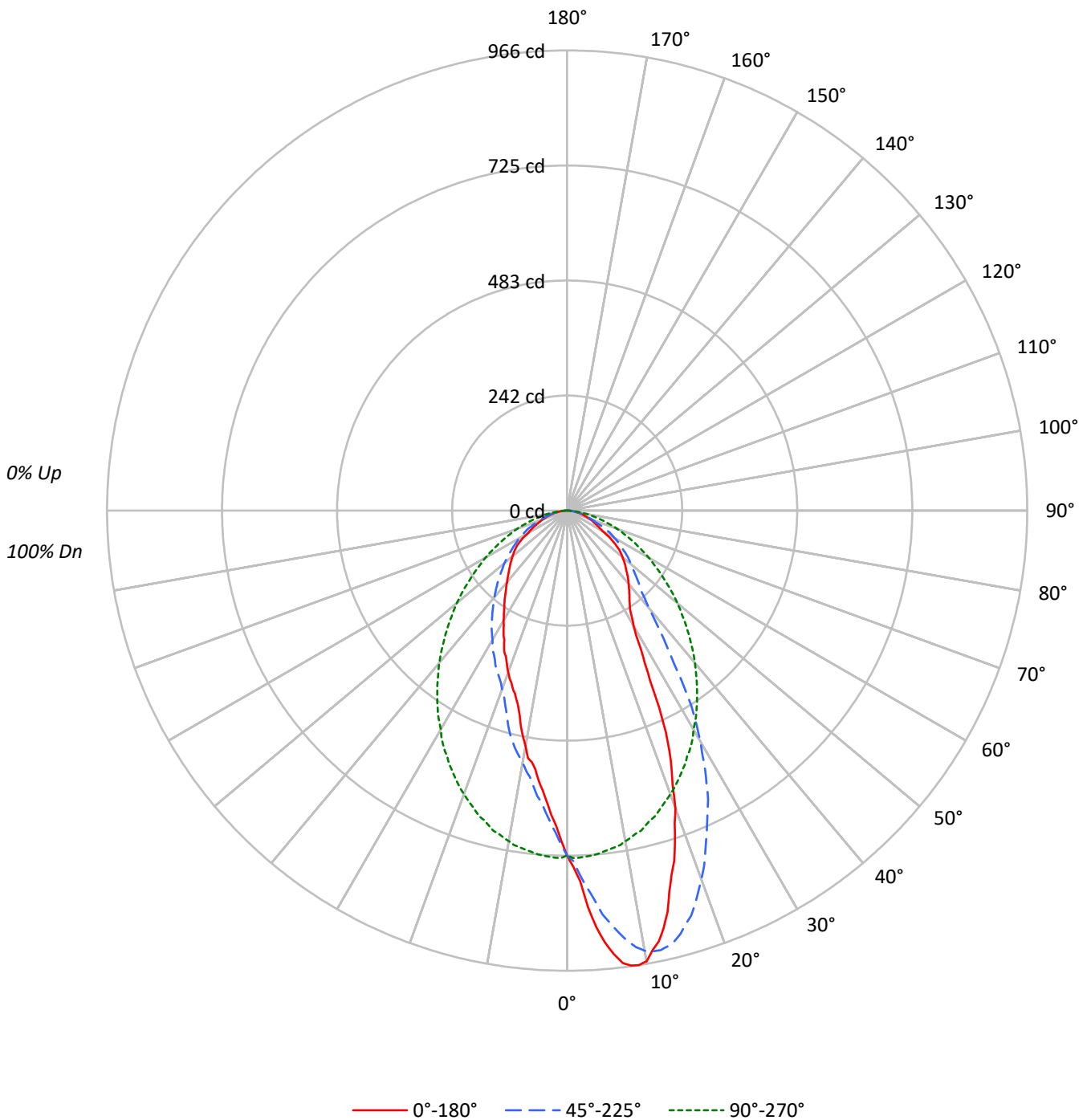
Input Watts (W): 12.5
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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				
2	102	95	89	84	99	93	87	83	89	85	81	86	82	79	83	80	77					75				
3	94	85	78	72	92	83	77	71	80	75	70	78	73	69	75	71	68					66				
4	87	77	69	63	85	75	68	62	73	67	62	71	65	61	69	64	60					58				
5	81	69	61	55	79	68	61	55	66	60	55	64	59	54	63	58	54					52				
6	75	63	55	50	74	63	55	49	61	54	49	59	53	49	58	52	48					46				
7	71	58	50	45	69	57	50	45	56	49	44	55	49	44	53	48	44					42				
8	66	54	46	41	65	53	46	41	52	45	40	51	45	40	50	44	40					38				
9	62	50	42	37	61	49	42	37	48	42	37	47	41	37	46	41	37					35				
10	59	46	39	34	57	46	39	34	45	39	34	44	38	34	43	38	34					32				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	13912	13912	13912	13912	13912
5°	17552	16418	13966	11866	11363
10°	18749	18308	13754	10501	9812
15°	16491	18301	13390	9414	8177
20°	13594	16845	12962	8174	7399
25°	9692	14789	12443	7569	6655
30°	6201	12405	11777	6945	5913
35°	5341	9140	11162	6443	5362
40°	5036	6684	10473	5962	4925
45°	4757	5727	9737	5526	4651
50°	4530	5218	9046	5140	4476
55°	4155	4829	8271	4725	4316
60°	3279	4402	7596	4432	3648
65°	2970	3939	6890	4116	3325
70°	2737	3181	6261	3546	3057
75°	2555	2874	5466	3171	2874
80°	2358	2601	4627	2845	2601
85°	2117	2294	3551	2492	2294

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 13630 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	70.2	5.7
10°-20°	188.6	15.2
20°-30°	236.6	19.1
30°-40°	225.4	18.2
40°-50°	198.9	16.0
50°-60°	156.4	12.6
60°-70°	99.8	8.0
70°-80°	50.7	4.1
80°-90°	13.5	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°	495.4	39.9
0°-40°	720.9	58.1
0°-60°	1076.2	86.8
0°-90°	1240.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1240.2	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	724	724	724	724	724	
5°	910	851	724	615	589	88
15°	829	920	673	473	411	230
25°	457	697	587	357	314	206
35°	228	390	476	275	228	145
45°	175	211	358	203	171	136
55°	124	144	247	141	129	109
65°	65	87	152	90	73	65
75°	34	39	74	43	39	37
85°	10	10	16	11	10	11
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°	723.8	723.8	723.8	723.8	723.8	723.8	723.8	723.8	723.8
1°	748.2	751.7	735.6	737.3	729.5	715.6	702.1	703.4	693.8
2°	778.2	787.4	765.2	751.7	729.0	704.7	677.7	674.2	662.5
3°	832.6	828.3	791.7	764.3	727.3	690.7	656.8	649.0	638.9
4°	876.6	863.5	818.7	780.4	726.4	674.6	636.3	622.8	612.8
5°	909.7	893.1	850.9	792.6	723.8	665.5	615.0	599.8	588.9
6°	936.2	923.6	871.8	803.9	720.3	652.0	602.4	581.9	570.6
7°	956.7	946.2	893.1	819.1	717.3	638.5	582.4	561.0	547.5
8°	964.5	959.7	912.7	830.0	713.8	628.9	564.5	545.4	533.2
9°	965.8	966.3	928.4	840.5	710.8	611.5	551.9	532.3	525.8
10°	960.6	964.5	938.0	852.2	704.7	602.8	538.0	519.3	502.7
11°	940.1	957.6	942.8	860.1	699.4	588.9	525.8	501.4	484.9
12°	924.9	941.4	943.2	870.1	693.4	582.4	515.3	482.7	465.3
13°	899.7	917.1	938.8	872.7	689.9	566.3	502.3	463.5	442.2
14°	869.6	897.5	931.9	878.3	681.2	552.3	489.2	436.6	423.9
15°	828.7	868.3	919.7	880.5	672.9	542.8	473.1	423.1	410.9
16°	794.8	839.6	903.1	880.5	667.7	529.7	455.7	411.3	399.1
17°	769.1	805.6	889.7	880.9	659.0	520.6	438.3	400.4	390.9
18°	733.0	773.9	868.3	879.2	649.8	509.7	423.5	391.3	379.5
19°	692.9	741.7	845.7	876.2	642.0	498.4	407.8	381.7	371.7
20°	664.6	709.5	823.5	871.4	633.7	491.0	399.6	370.8	361.7
21°	617.2	672.0	801.3	864.8	625.0	478.3	388.2	361.3	351.2
22.5°	568.9	619.4	760.4	854.0	610.7	462.7	375.6	349.5	334.7
23°	550.2	606.7	747.8	850.9	605.9	458.8	371.7	344.3	331.2
24°	510.1	568.9	721.6	841.3	595.4	445.7	364.3	333.8	324.7
25°	457.0	536.7	697.3	831.3	586.7	436.1	356.9	325.6	313.8
26°	396.9	492.7	675.1	819.1	574.5	423.1	346.9	317.7	301.2
27°	360.0	454.8	645.0	806.1	565.8	413.5	338.6	306.0	294.2
28°	330.4	395.2	618.1	793.5	555.4	401.7	333.0	297.7	283.8
29°	298.1	362.6	586.3	776.5	544.1	388.2	323.8	289.4	274.6
30°	279.4	327.7	558.9	763.9	530.6	379.1	312.9	281.2	266.4
32.5°	245.5	270.3	484.4	727.7	504.9	353.0	295.1	258.5	245.9
35°	227.6	240.7	389.5	685.5	475.7	331.2	274.6	239.8	228.5
37.5°	214.1	222.0	321.7	640.3	446.1	312.1	255.9	222.4	211.5
40°	200.7	206.7	266.4	596.7	417.4	293.4	237.6	204.6	196.3
42.5°	188.5	193.3	231.1	553.6	387.8	274.2	219.8	190.6	183.2
45°	175.0	179.3	210.7	501.4	358.2	254.6	203.3	175.4	171.1
47.5°	163.7	166.7	191.1	454.8	329.0	235.9	186.3	163.2	160.2
50°	151.5	155.4	174.5	403.0	302.5	217.6	171.9	152.3	149.7
52.5°	139.7	141.5	160.6	351.2	274.6	199.8	156.7	141.5	139.7
55°	124.0	131.0	144.1	298.1	246.8	183.2	141.0	130.1	128.8
57.5°	106.2	115.3	129.3	250.3	220.7	165.0	128.4	119.7	114.0
60°	85.3	96.2	114.5	208.0	197.6	148.4	115.3	101.8	94.9
62.5°	74.9	78.3	101.0	174.1	174.1	132.8	102.3	87.5	84.4
65°	65.3	67.9	86.6	144.1	151.5	115.3	90.5	75.7	73.1



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	57.0	59.2	66.2	120.1	130.6	100.5	74.9	66.2	63.1
70°	48.7	50.5	56.6	97.9	111.4	85.7	63.1	56.6	54.4
72.5°	41.3	43.1	46.6	73.6	91.4	71.4	53.1	48.3	46.6
75°	34.4	35.3	38.7	54.8	73.6	57.0	42.7	39.6	38.7
77.5°	27.9	28.3	30.5	39.2	57.0	43.5	34.4	31.8	31.3
80°	21.3	21.8	23.5	28.3	41.8	31.3	25.7	24.4	23.5
82.5°	15.2	15.7	16.5	19.2	28.3	21.3	18.3	17.8	16.5
85°	9.6	9.6	10.4	11.8	16.1	12.2	11.3	10.9	10.4
87.5°	4.4	4.4	4.8	4.8	7.4	5.2	5.2	4.8	4.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)