

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: P735911

Luminaire Tested: S122RDR-S290D927-X4F0-XX-UDD-W-W

Issue Date: 1/24/2024

Test Information

Test Method: LM-79-2019
Report Number: P735911
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-S290D927-X4F0-XX-UDD-W-W
Description: DEFINE 2 REGRESSED DIRECT RECESSED WITH WALL WASH OPTIC
Light Source: 2700K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 982.5 lumens
Efficiency: N/A
Efficacy: 78.6 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

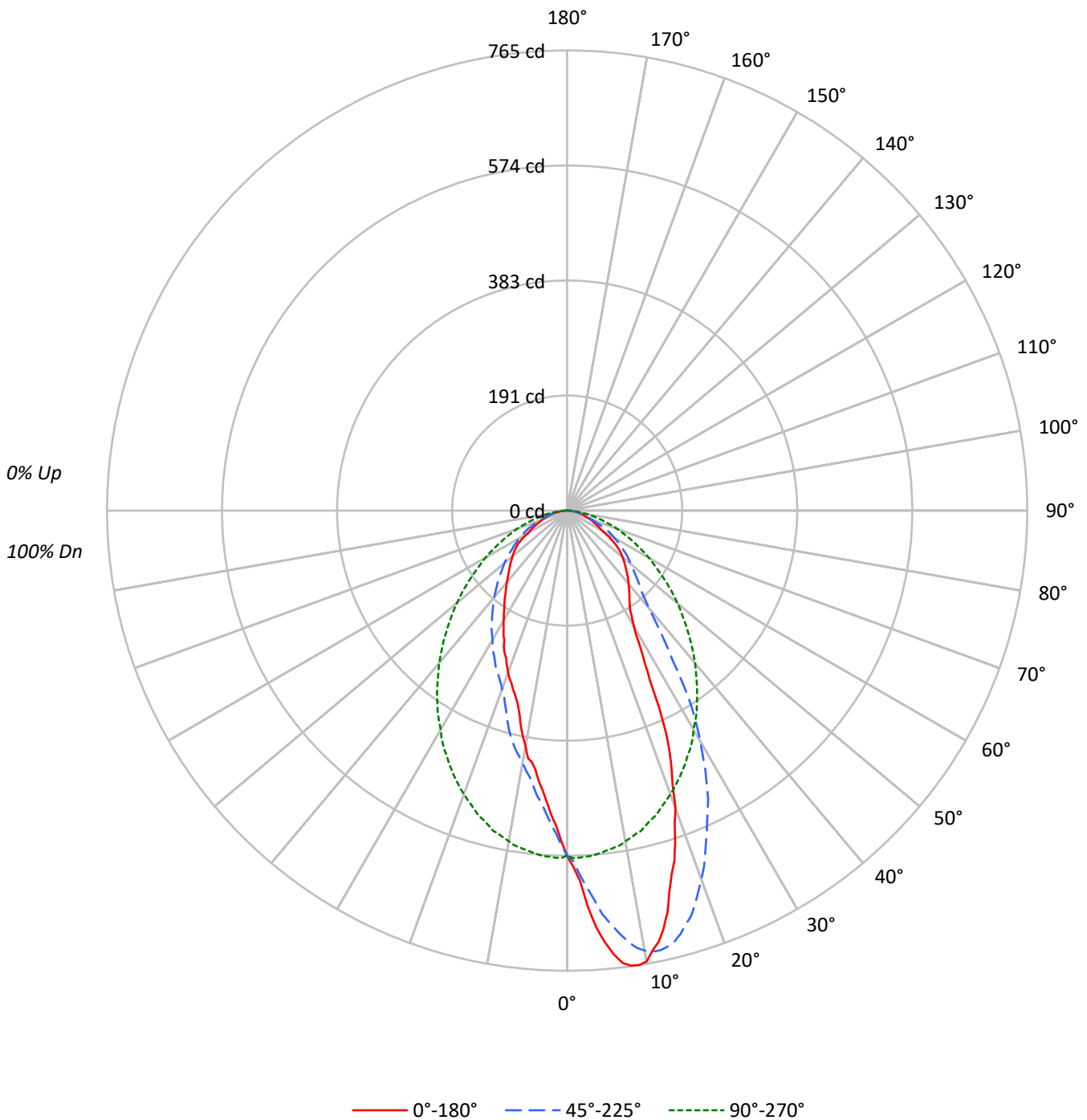
Input Watts (W): 12.5
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	11021	11021	11021	11021	11021
5°	13904	13007	11064	9400	9001
10°	14853	14502	10895	8318	7772
15°	13064	14499	10608	7458	6477
20°	10769	13345	10268	6474	5860
25°	7677	11715	9858	5996	5272
30°	4914	9826	9328	5502	4683
35°	4231	7241	8844	5106	4247
40°	3990	5294	8298	4725	3902
45°	3768	4537	7715	4376	3683
50°	3588	4136	7165	4073	3546
55°	3294	3824	6551	3743	3422
60°	2599	3487	6016	3514	2891
65°	2351	3120	5458	3261	2633
70°	2169	2518	4962	2810	2422
75°	2020	2280	4330	2510	2280
80°	1871	2059	3664	2247	2059
85°	1676	1830	2823	1985	1830

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 10797 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	55.6	5.7
10°-20°	149.4	15.2
20°-30°	187.4	19.1
30°-40°	178.6	18.2
40°-50°	157.6	16.0
50°-60°	123.9	12.6
60°-70°	79.1	8.0
70°-80°	40.2	4.1
80°-90°	10.7	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°	392.5	39.9
0°-40°	571.1	58.1
0°-60°	852.6	86.8
0°-90°	982.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	982.5	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	573	573	573	573	573	
5°	721	674	573	487	466	70
15°	656	729	533	375	326	182
25°	362	552	465	283	249	163
35°	180	309	377	218	181	115
45°	139	167	284	161	136	107
55°	98	114	196	112	102	86
65°	52	69	120	72	58	52
75°	27	31	58	34	31	29
85°	8	8	13	9	8	9
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°	573.4	573.4	573.4	573.4	573.4	573.4	573.4	573.4	573.4
1°	592.7	595.5	582.7	584.1	577.9	566.8	556.2	557.2	549.6
2°	616.5	623.7	606.2	595.5	577.5	558.2	536.8	534.1	524.8
3°	659.6	656.1	627.2	605.5	576.2	547.2	520.3	514.1	506.2
4°	694.4	684.1	648.6	618.2	575.5	534.4	504.1	493.4	485.5
5°	720.6	707.5	674.1	627.9	573.4	527.2	487.2	475.1	466.5
6°	741.7	731.7	690.6	636.8	570.6	516.5	477.2	461.0	452.0
7°	757.9	749.6	707.5	648.9	568.2	505.8	461.3	444.4	433.8
8°	764.1	760.3	723.0	657.5	565.5	498.2	447.2	432.0	422.4
9°	765.1	765.5	735.5	665.8	563.1	484.4	437.2	421.7	416.5
10°	761.0	764.1	743.0	675.1	558.2	477.5	426.2	411.3	398.2
11°	744.8	758.6	746.8	681.3	554.1	466.5	416.5	397.2	384.1
12°	732.7	745.8	747.2	689.3	549.3	461.3	408.2	382.4	368.6
13°	712.7	726.5	743.7	691.3	546.5	448.6	397.9	367.2	350.3
14°	688.9	711.0	738.2	695.8	539.6	437.5	387.6	345.8	335.8
15°	656.5	687.9	728.6	697.5	533.1	430.0	374.8	335.1	325.5
16°	629.6	665.1	715.5	697.5	528.9	419.6	361.0	325.8	316.2
17°	609.3	638.2	704.8	697.9	522.0	412.4	347.2	317.2	309.6
18°	580.6	613.0	687.9	696.5	514.8	403.8	335.5	310.0	300.7
19°	548.9	587.5	669.9	694.1	508.6	394.8	323.1	302.4	294.5
20°	526.5	562.0	652.4	690.3	502.0	388.9	316.5	293.8	286.5
21°	488.9	532.4	634.8	685.1	495.1	378.9	307.6	286.2	278.3
22.5°	450.7	490.6	602.4	676.5	483.8	366.5	297.6	276.9	265.1
23°	435.8	480.6	592.4	674.1	480.0	363.4	294.5	272.7	262.4
24°	404.1	450.7	571.7	666.5	471.7	353.1	288.6	264.5	257.2
25°	362.0	425.1	552.4	658.6	464.8	345.5	282.7	257.9	248.6
26°	314.5	390.3	534.8	648.9	455.1	335.1	274.8	251.7	238.6
27°	285.1	360.3	511.0	638.6	448.2	327.6	268.3	242.4	233.1
28°	261.7	313.1	489.6	628.6	440.0	318.2	263.8	235.8	224.8
29°	236.2	287.2	464.4	615.1	431.0	307.6	256.5	229.3	217.6
30°	221.4	259.6	442.7	605.1	420.3	300.3	247.9	222.7	211.0
32.5°	194.5	214.1	383.8	576.5	400.0	279.6	233.8	204.8	194.8
35°	180.3	190.7	308.6	543.1	376.9	262.4	217.6	190.0	181.0
37.5°	169.6	175.8	254.8	507.2	353.4	247.2	202.7	176.2	167.6
40°	159.0	163.8	211.0	472.7	330.7	232.4	188.3	162.1	155.5
42.5°	149.3	153.1	183.1	438.6	307.2	217.2	174.1	151.0	145.2
45°	138.6	142.1	166.9	397.2	283.8	201.7	161.0	139.0	135.5
47.5°	129.6	132.1	151.4	360.3	260.7	186.9	147.6	129.3	126.9
50°	120.0	123.1	138.3	319.3	239.6	172.4	136.2	120.7	118.6
52.5°	110.7	112.1	127.2	278.3	217.6	158.3	124.1	112.1	110.7
55°	98.3	103.8	114.1	236.2	195.5	145.2	111.7	103.1	102.1
57.5°	84.1	91.4	102.4	198.3	174.8	130.7	101.7	94.8	90.3
60°	67.6	76.2	90.7	164.8	156.5	117.6	91.4	80.7	75.2
62.5°	59.3	62.1	80.0	137.9	137.9	105.2	81.0	69.3	66.9
65°	51.7	53.8	68.6	114.1	120.0	91.4	71.7	60.0	57.9



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	45.2	46.9	52.4	95.2	103.4	79.6	59.3	52.4	50.0
70°	38.6	40.0	44.8	77.6	88.3	67.9	50.0	44.8	43.1
72.5°	32.8	34.1	36.9	58.3	72.4	56.5	42.1	38.3	36.9
75°	27.2	27.9	30.7	43.4	58.3	45.2	33.8	31.4	30.7
77.5°	22.1	22.4	24.1	31.0	45.2	34.5	27.2	25.2	24.8
80°	16.9	17.2	18.6	22.4	33.1	24.8	20.3	19.3	18.6
82.5°	12.1	12.4	13.1	15.2	22.4	16.9	14.5	14.1	13.1
85°	7.6	7.6	8.3	9.3	12.8	9.7	9.0	8.6	8.3
87.5°	3.4	3.4	3.8	3.8	5.9	4.1	4.1	3.8	3.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)