

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



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: P1058297

Luminaire Tested: S122RDR-H290D840-X4F0-XX-UDD-SVL-S

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1058297
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-59)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S122RDR-H290D840-X4F0-XX-UDD-SVL-S
Description: DEFINE 2 SILVER REGRESSED DIRECT RECESSED HOUSING WITH SILVER STRAIGHT BLADE LOUVER WITH DIFFUSER
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

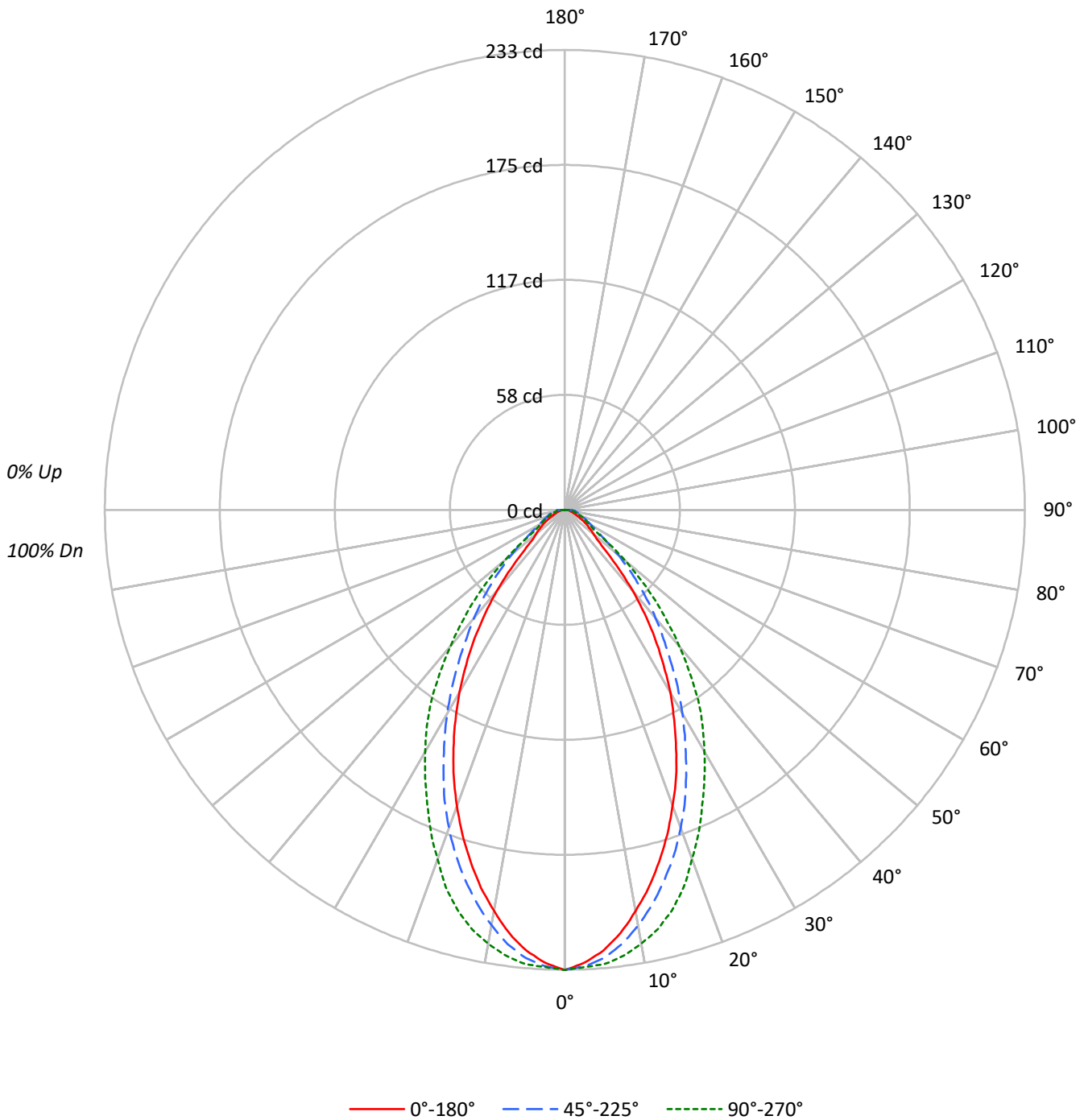
Lumens per Lamp: N/A
Luminaire Lumens: 281.2 lumens
Efficiency: N/A
Efficacy: 24.0 lumens/watt
Spacing Criteria (0/90/45): 0.82 / 0.97 / 0.94
Luminous Opening: Rectangular (W 0.15' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 11.7
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: P1058297

CATALOG NUMBER: S122RDR-H290D840-X4F0-XX-UDD-SVL-S

Luminous Intensity Polar Plot





TEST NUMBER: P1058297

CATALOG NUMBER: S122RDR-H290D840-X4F0-XX-UDD-SVL-S

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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	111	108	105	102	109	106	103	100	101	99	97	98	96	94	94	93	91	89
2	104	98	93	88	102	96	91	87	93	89	85	90	86	83	87	84	82	80
3	97	89	83	78	95	88	82	77	85	80	76	82	78	75	80	77	74	72
4	91	82	75	70	89	81	74	69	78	73	68	76	71	68	74	70	67	65
5	86	75	68	63	84	74	68	63	72	66	62	71	65	61	69	64	61	59
6	80	70	62	57	79	69	62	57	67	61	57	66	60	56	64	59	56	54
7	76	65	57	52	74	64	57	52	62	56	52	61	56	52	60	55	51	50
8	71	60	53	48	70	59	53	48	58	52	48	57	52	48	56	51	47	46
9	67	56	49	45	66	56	49	44	55	49	44	54	48	44	53	48	44	42
10	64	53	46	41	63	52	46	41	51	45	41	50	45	41	50	45	41	39

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4301	4301	4301
5°	4151	4221	4279
10°	3867	4006	4182
15°	3525	3714	4010
20°	3134	3370	3700
25°	2714	2960	3353
30°	2273	2538	3015
35°	1793	2102	2654
40°	1284	1720	2175
45°	752	1357	1683
50°	543	988	1137
55°	457	705	595
60°	365	572	509
65°	301	506	472
70°	254	486	442
75°	242	520	428
80°	276	638	457
85°	466	995	635

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 1683 cd/sqm



TEST NUMBER: P1058297

CATALOG NUMBER: S122RDR-H290D840-X4F0-XX-UDD-SVL-S

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	21.4	7.6
10°-20°	54.7	19.5
20°-30°	67.3	23.9
30°-40°	59.5	21.1
40°-50°	37.9	13.5
50°-60°	18.5	6.6
60°-70°	11.0	3.9
70°-80°	7.0	2.5
80°-90°	3.9	1.4
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°	143.3	51.0
0°-40°	202.8	72.1
0°-60°	259.2	92.2
0°-90°	281.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	281.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	233	233	233	233	233	
5°	224	229	228	229	231	21
15°	184	190	194	203	210	51
25°	133	138	145	154	165	61
35°	80	84	93	106	118	49
45°	29	37	52	58	64	24
55°	14	19	22	21	18	13
65°	7	13	12	11	11	7
75°	3	8	7	6	6	4
85°	2	4	5	4	3	2
90°	0	0	0	0	0	

TEST NUMBER: P1058297

CATALOG NUMBER: S122RDR-H290D840-X4F0-XX-UDD-SVL-S

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	233.1	233.1	233.1	233.1	233.1
2.5°	229.7	234.0	231.4	231.4	231.8
5°	224.1	228.8	227.9	228.8	231.0
7.5°	216.3	221.1	221.9	225.4	227.9
10°	206.4	211.2	213.8	219.3	223.2
12.5°	196.1	200.8	204.7	212.0	217.6
15°	184.5	189.7	194.4	203.0	209.9
17.5°	172.5	177.6	183.6	192.2	200.4
20°	159.6	164.3	171.6	179.8	188.4
22.5°	147.1	151.4	159.1	166.9	177.2
25°	133.3	138.1	145.4	154.4	164.7
27.5°	120.0	124.7	132.0	142.4	153.1
30°	106.7	111.0	119.1	129.9	141.5
32.5°	92.9	97.2	106.2	117.8	129.9
35°	79.6	83.9	93.3	106.2	117.8
37.5°	66.2	71.0	81.7	93.8	103.6
40°	53.3	58.9	71.4	81.7	90.3
42.5°	40.4	48.2	61.5	70.1	77.0
45°	28.8	37.0	52.0	58.5	64.5
47.5°	21.9	28.4	43.0	47.7	51.6
50°	18.9	23.2	34.4	37.8	39.6
52.5°	16.3	20.6	27.5	28.8	28.0
55°	14.2	18.9	21.9	20.6	18.5
57.5°	12.0	17.6	18.1	15.5	15.9
60°	9.9	15.9	15.5	13.3	13.8
62.5°	8.2	14.6	13.3	12.0	12.0
65°	6.9	12.9	11.6	10.8	10.8
67.5°	5.6	11.6	10.3	9.5	9.5
70°	4.7	10.3	9.0	8.2	8.2
72.5°	4.3	9.0	8.2	7.3	7.3
75°	3.4	7.7	7.3	6.5	6.0
77.5°	3.0	6.5	6.5	6.0	5.2
80°	2.6	5.6	6.0	5.2	4.3
82.5°	2.6	5.2	5.2	4.7	3.4
85°	2.2	4.3	4.7	4.3	3.0
87.5°	1.3	3.9	3.9	3.4	2.2
90°	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P1058297
 CATALOG NUMBER: S122RDR-H290D840-X4F0-XX-UDD-SVL-S

CIE UGR TABLE:

Reflectances:											
Ceiling		0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
Wall		0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
Reference plane		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room dimensions		Viewed crosswise					Viewed endwise				
X=2H	Y=2H	7.08	8.36	7.45	8.67	8.99	6.63	7.91	6.99	8.22	8.53
	3H	8.26	9.40	8.64	9.73	10.09	8.20	9.34	8.58	9.67	10.03
	4H	8.69	9.75	9.09	10.10	10.48	8.88	9.94	9.28	10.29	10.67
	6H	9.04	10.01	9.45	10.38	10.78	9.53	10.51	9.94	10.88	11.27
	8H	9.24	10.16	9.67	10.55	10.96	9.81	10.74	10.24	11.13	11.53
	12H	9.46	10.35	9.89	10.73	11.16	10.12	11.01	10.56	11.39	11.82
4H	2H	7.59	8.65	7.99	9.00	9.38	7.22	8.29	7.63	8.64	9.02
	3H	9.23	10.11	9.65	10.51	10.91	9.03	9.91	9.44	10.31	10.71
	4H	9.99	10.78	10.43	11.20	11.64	9.87	10.66	10.31	11.08	11.52
	6H	10.60	11.28	11.06	11.73	12.19	10.73	11.41	11.20	11.86	12.33
	8H	10.91	11.54	11.38	11.99	12.46	11.12	11.75	11.59	12.20	12.67
	12H	11.23	11.79	11.71	12.27	12.75	11.55	12.11	12.03	12.59	13.07
8H	4H	10.41	11.05	10.88	11.50	11.97	10.33	10.97	10.80	11.42	11.89
	6H	11.37	11.89	11.87	12.39	12.87	11.44	11.96	11.94	12.46	12.94
	8H	11.93	12.40	12.45	12.91	13.40	12.01	12.48	12.54	13.00	13.49
	12H	12.50	12.91	13.01	13.41	13.98	12.68	13.09	13.19	13.59	14.16
12H	4H	10.49	11.05	10.97	11.53	12.01	10.42	10.98	10.90	11.46	11.94
	6H	11.56	12.03	12.08	12.54	13.03	11.63	12.10	12.15	12.61	13.10
	8H	12.26	12.67	12.77	13.17	13.74	12.33	12.75	12.85	13.24	13.81