

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: P1058285

Luminaire Tested: S122RDR-H290D835-X4F0-XX-UDD-BVL-S

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1058285
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-60)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S122RDR-H290D835-X4F0-XX-UDD-BVL-S
Description: DEFINE 2 SILVER REGRESSED DIRECT RECESSED HOUSING WITH BLACK STRAIGHT BLADE LOUVER WITH DIFFUSER
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

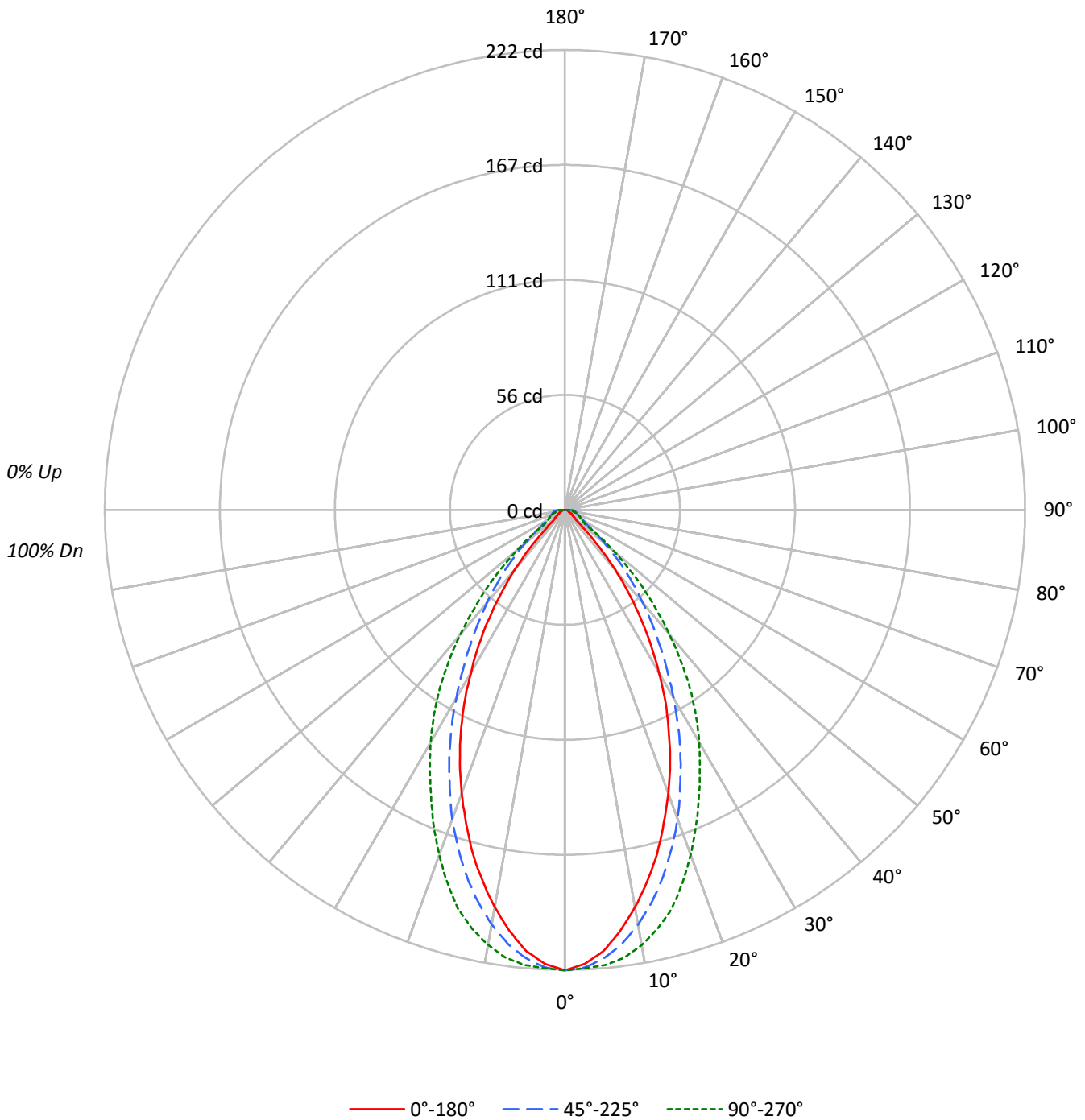
Lumens per Lamp: N/A
Luminaire Lumens: 239.7 lumens
Efficiency: N/A
Efficacy: 20.5 lumens/watt
Spacing Criteria (0/90/45): 0.79 / 0.95 / 0.9
Luminous Opening: Rectangular (W 0.15' x L: 4' x H: 0')
CIE Type: Direct

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

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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				
1	112	108	105	102	109	106	103	101	102	100	97	98	96	95	95	93	92	90				
2	105	99	94	90	102	97	92	89	94	90	87	91	87	85	88	85	83	81				
3	98	91	85	80	96	89	84	79	86	82	78	84	80	77	82	78	75	74				
4	92	83	77	72	90	82	76	71	80	75	70	78	73	70	76	72	69	67				
5	87	77	70	65	85	76	70	65	74	69	64	72	68	64	71	67	63	61				
6	82	72	65	60	80	71	64	59	69	63	59	68	63	59	66	62	58	57				
7	77	67	60	55	76	66	59	55	65	59	54	63	58	54	62	57	54	52				
8	73	62	55	51	72	62	55	51	61	55	50	59	54	50	58	54	50	48				
9	69	58	52	47	68	58	51	47	57	51	47	56	51	47	55	50	47	45				
10	66	55	48	44	65	54	48	44	54	48	44	53	47	44	52	47	44	42				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4102	4102	4102
5°	3960	4023	4086
10°	3648	3807	3999
15°	3280	3500	3807
20°	2861	3120	3480
25°	2419	2688	3113
30°	1933	2233	2759
35°	1430	1795	2370
40°	903	1407	1888
45°	355	1057	1388
50°	184	709	855
55°	151	466	383
60°	111	376	347
65°	92	354	354
70°	92	367	345
75°	121	428	364
80°	181	542	404
85°	275	910	550

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 87.5°
 Luminance: 1819 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	20.3	8.5
10°-20°	51.4	21.4
20°-30°	61.0	25.5
30°-40°	50.8	21.2
40°-50°	28.4	11.8
50°-60°	11.5	4.8
60°-70°	7.3	3.1
70°-80°	5.5	2.3
80°-90°	3.5	1.5
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°	132.8	55.4
0°-40°	183.5	76.6
0°-60°	223.3	93.2
0°-90°	239.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	239.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	222	222	222	222	222	
5°	214	218	217	219	221	20
15°	172	177	183	192	199	48
25°	119	124	132	142	153	54
35°	64	69	80	93	105	39
45°	14	23	40	47	53	13
55°	5	10	14	14	12	4
65°	2	8	8	8	8	2
75°	2	6	6	6	5	2
85°	1	4	4	4	3	1
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	222.3	222.3	222.3	222.3	222.3
2.5°	219.4	222.8	221.1	221.1	221.5
5°	213.8	217.7	217.2	218.9	220.6
7.5°	204.9	209.1	211.3	215.1	218.1
10°	194.7	199.3	203.2	209.1	213.4
12.5°	183.6	188.3	193.8	201.5	207.0
15°	171.7	176.8	183.2	192.5	199.3
17.5°	158.5	164.0	171.2	181.5	188.7
20°	145.7	151.2	158.9	169.1	177.2
22.5°	132.5	137.2	145.2	155.5	165.3
25°	118.8	123.5	132.0	142.3	152.9
27.5°	105.2	109.9	118.4	129.1	141.0
30°	90.7	95.8	104.8	116.7	129.5
32.5°	77.1	82.2	91.6	104.8	117.6
35°	63.5	69.4	79.7	92.9	105.2
37.5°	50.3	57.1	68.6	80.9	92.0
40°	37.5	44.7	58.4	69.0	78.4
42.5°	24.7	33.2	49.0	57.9	65.2
45°	13.6	23.0	40.5	47.3	53.2
47.5°	7.7	14.9	31.9	37.5	40.9
50°	6.4	11.1	24.7	28.5	29.8
52.5°	5.1	10.2	18.7	20.9	20.0
55°	4.7	9.8	14.5	14.1	11.9
57.5°	3.8	9.8	11.5	10.2	10.2
60°	3.0	9.4	10.2	8.9	9.4
62.5°	2.6	8.9	9.4	8.5	8.5
65°	2.1	8.5	8.1	7.7	8.1
67.5°	1.7	7.7	7.7	7.2	7.2
70°	1.7	7.2	6.8	6.4	6.4
72.5°	1.7	6.4	6.4	6.0	6.0
75°	1.7	6.0	6.0	5.5	5.1
77.5°	1.7	5.1	5.5	5.1	4.7
80°	1.7	4.7	5.1	4.7	3.8
82.5°	1.7	4.3	4.7	4.3	3.4
85°	1.3	3.8	4.3	3.8	2.6
87.5°	1.3	3.8	4.3	3.4	2.1
90°	0.0	0.0	0.0	0.0	0.0



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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	3.27	4.49	3.63	4.80	5.12	4.33	5.55	4.69	5.86	6.18
	3H	4.60	5.69	4.98	6.02	6.38	6.36	7.44	6.74	7.77	8.14
	4H	5.18	6.19	5.58	6.54	6.93	7.32	8.33	7.72	8.68	9.06
	6H	5.74	6.67	6.16	7.04	7.44	8.26	9.19	8.68	9.57	9.96
	8H	6.07	6.95	6.50	7.34	7.75	8.71	9.59	9.15	9.98	10.39
	12H	6.38	7.22	6.81	7.60	8.03	9.14	9.99	9.58	10.37	10.80
4H	2H	4.24	5.25	4.64	5.60	5.98	5.01	6.02	5.42	6.37	6.76
	3H	6.26	7.09	6.67	7.50	7.90	7.30	8.13	7.71	8.53	8.94
	4H	7.35	8.10	7.78	8.52	8.96	8.44	9.19	8.88	9.61	10.05
	6H	8.22	8.87	8.68	9.31	9.78	9.61	10.26	10.08	10.71	11.18
	8H	8.63	9.24	9.10	9.69	10.16	10.18	10.78	10.65	11.23	11.70
	12H	9.01	9.55	9.50	10.03	10.51	10.73	11.26	11.22	11.75	12.22
8H	4H	8.12	8.72	8.59	9.17	9.64	8.99	9.60	9.46	10.05	10.52
	6H	9.46	9.95	9.96	10.45	10.93	10.45	10.95	10.96	11.45	11.93
	8H	10.18	10.63	10.70	11.14	11.64	11.22	11.67	11.75	12.18	12.68
	12H	10.87	11.26	11.39	11.76	12.33	12.01	12.41	12.53	12.90	13.47
12H	4H	8.27	8.81	8.76	9.29	9.77	9.10	9.64	9.59	10.12	10.59
	6H	9.78	10.23	10.30	10.74	11.24	10.68	11.13	11.20	11.64	12.14
	8H	10.69	11.08	11.21	11.58	12.15	11.59	11.99	12.11	12.48	13.06