

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: P1058294

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

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1058294
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-H290D840-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: 4000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

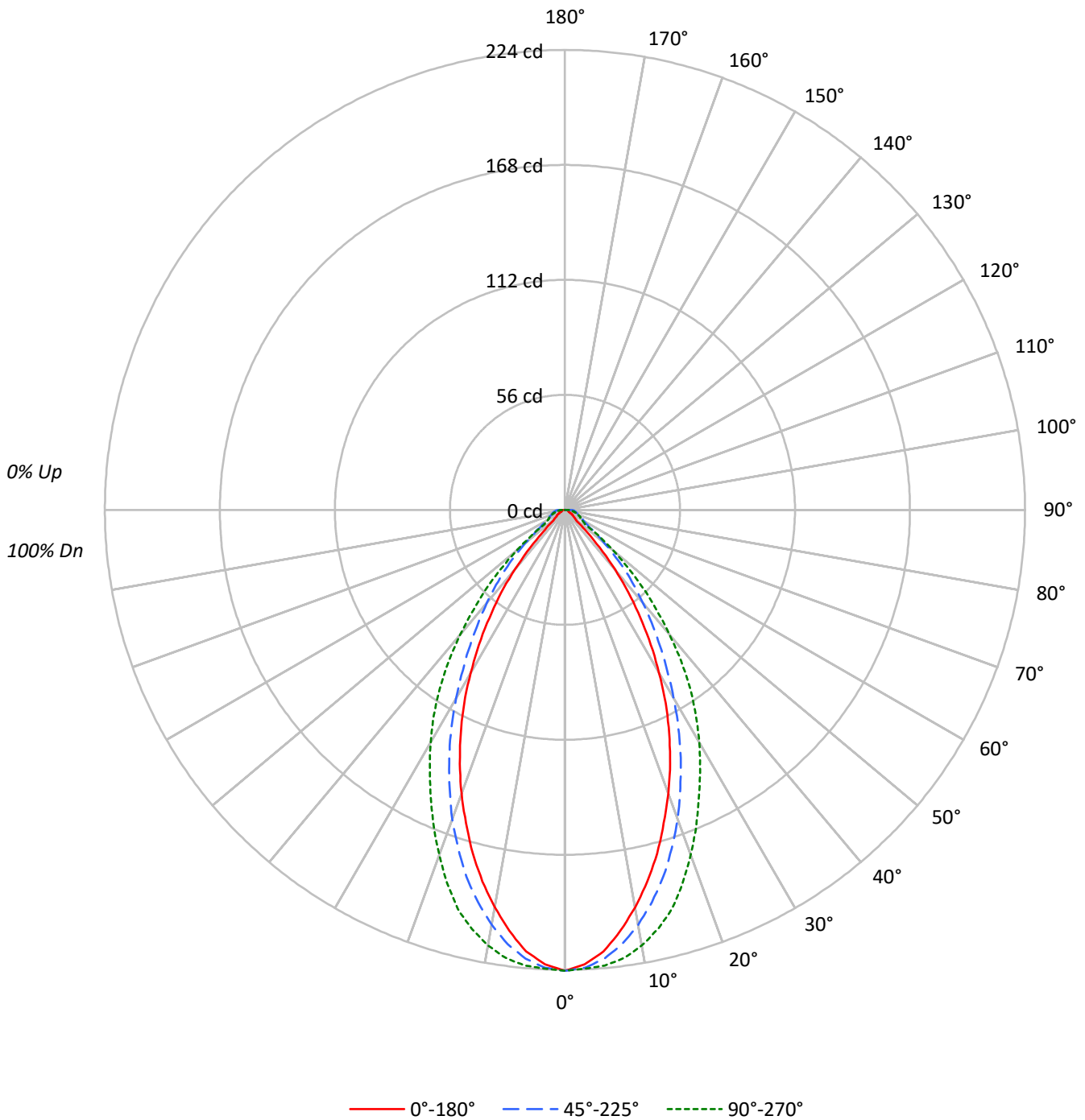
Lumens per Lamp: N/A
Luminaire Lumens: 242.0 lumens
Efficiency: N/A
Efficacy: 20.7 lumens/watt
Spacing Criteria (0/90/45): 0.79 / 0.95 / 0.9
Luminous Opening: Rectangular (W 0.15' x L: 4' x H: 0')
CIE Type: Direct

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	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°	4143	4143	4143
5°	3999	4064	4127
10°	3684	3845	4038
15°	3311	3534	3846
20°	2889	3150	3513
25°	2443	2714	3144
30°	1952	2254	2787
35°	1444	1811	2392
40°	913	1419	1905
45°	360	1067	1404
50°	187	715	864
55°	151	470	386
60°	111	380	351
65°	96	358	358
70°	92	372	351
75°	121	428	371
80°	181	553	414
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°	20.5	8.5
10°-20°	51.9	21.4
20°-30°	61.6	25.5
30°-40°	51.3	21.2
40°-50°	28.6	11.8
50°-60°	11.6	4.8
60°-70°	7.4	3.1
70°-80°	5.6	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°	134.1	55.4
0°-40°	185.3	76.6
0°-60°	225.5	93.2
0°-90°	242.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	242.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	224	224	224	224	224	
5°	216	220	219	221	223	20
15°	173	178	185	194	201	48
25°	120	125	133	144	154	55
35°	64	70	80	94	106	40
45°	14	23	41	48	54	13
55°	5	10	15	14	12	4
65°	2	9	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°	224.5	224.5	224.5	224.5	224.5
2.5°	221.5	225.0	223.2	223.2	223.7
5°	215.9	219.8	219.4	221.1	222.8
7.5°	206.9	211.2	213.4	217.2	220.2
10°	196.6	201.3	205.2	211.2	215.5
12.5°	185.4	190.1	195.7	203.5	209.1
15°	173.3	178.5	185.0	194.4	201.3
17.5°	160.0	165.6	172.9	183.2	190.6
20°	147.1	152.7	160.4	170.8	178.9
22.5°	133.8	138.5	146.7	157.0	166.9
25°	120.0	124.7	133.3	143.7	154.4
27.5°	106.2	111.0	119.6	130.3	142.4
30°	91.6	96.8	105.8	117.9	130.8
32.5°	77.9	83.0	92.5	105.8	118.7
35°	64.1	70.1	80.4	93.8	106.2
37.5°	50.8	57.6	69.3	81.7	92.9
40°	37.9	45.2	58.9	69.7	79.1
42.5°	24.9	33.6	49.5	58.5	65.8
45°	13.8	23.2	40.9	47.7	53.8
47.5°	7.7	15.1	32.3	37.9	41.3
50°	6.5	11.2	24.9	28.8	30.1
52.5°	5.2	10.3	18.9	21.1	20.2
55°	4.7	9.9	14.6	14.2	12.0
57.5°	3.9	9.9	11.6	10.3	10.3
60°	3.0	9.5	10.3	9.0	9.5
62.5°	2.6	9.0	9.5	8.6	8.6
65°	2.2	8.6	8.2	7.7	8.2
67.5°	1.7	7.7	7.7	7.3	7.3
70°	1.7	7.3	6.9	6.5	6.5
72.5°	1.7	6.5	6.5	6.0	6.0
75°	1.7	6.0	6.0	5.6	5.2
77.5°	1.7	5.2	5.6	5.2	4.7
80°	1.7	4.7	5.2	4.7	3.9
82.5°	1.7	4.3	4.7	4.3	3.4
85°	1.3	3.9	4.3	3.9	2.6
87.5°	1.3	3.9	4.3	3.4	2.2
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	3.31	4.53	3.68	4.85	5.16	4.36	5.58	4.73	5.89	6.21
	3H	4.63	5.71	5.01	6.04	6.41	6.41	7.49	6.79	7.82	8.19
	4H	5.20	6.21	5.60	6.56	6.95	7.37	8.38	7.77	8.73	9.11
	6H	5.76	6.69	6.18	7.06	7.46	8.31	9.24	8.73	9.61	10.01
	8H	6.08	6.96	6.52	7.35	7.76	8.76	9.64	9.19	10.03	10.43
	12H	6.39	7.23	6.83	7.62	8.05	9.18	10.02	9.61	10.40	10.83
4H	2H	4.28	5.29	4.69	5.64	6.03	5.05	6.06	5.45	6.41	6.80
	3H	6.30	7.13	6.71	7.54	7.94	7.34	8.18	7.76	8.58	8.99
	4H	7.37	8.12	7.81	8.54	8.99	8.50	9.24	8.93	9.66	10.11
	6H	8.24	8.89	8.71	9.34	9.80	9.66	10.31	10.13	10.76	11.23
	8H	8.65	9.25	9.12	9.70	10.17	10.22	10.82	10.69	11.27	11.74
	12H	9.03	9.57	9.52	10.05	10.52	10.76	11.30	11.25	11.78	12.26
8H	4H	8.15	8.75	8.62	9.20	9.67	9.05	9.65	9.52	10.10	10.57
	6H	9.48	9.98	9.99	10.48	10.96	10.50	10.99	11.00	11.49	11.97
	8H	10.20	10.64	10.72	11.16	11.65	11.26	11.70	11.78	12.22	12.71
	12H	10.90	11.29	11.41	11.78	12.36	12.05	12.44	12.56	12.94	13.51
12H	4H	8.30	8.84	8.79	9.32	9.80	9.15	9.69	9.64	10.17	10.65
	6H	9.80	10.25	10.33	10.77	11.26	10.72	11.17	11.25	11.69	12.18
	8H	10.70	11.10	11.22	11.59	12.17	11.62	12.02	12.14	12.51	13.09