

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: P1058306

Luminaire Tested: S122RDR-H290D850-X4F0-XX-UDD-SVL-S

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1058306  
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-H290D850-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: 5000K CCT, 80 CRI LEDS  
Ballast/Driver: -

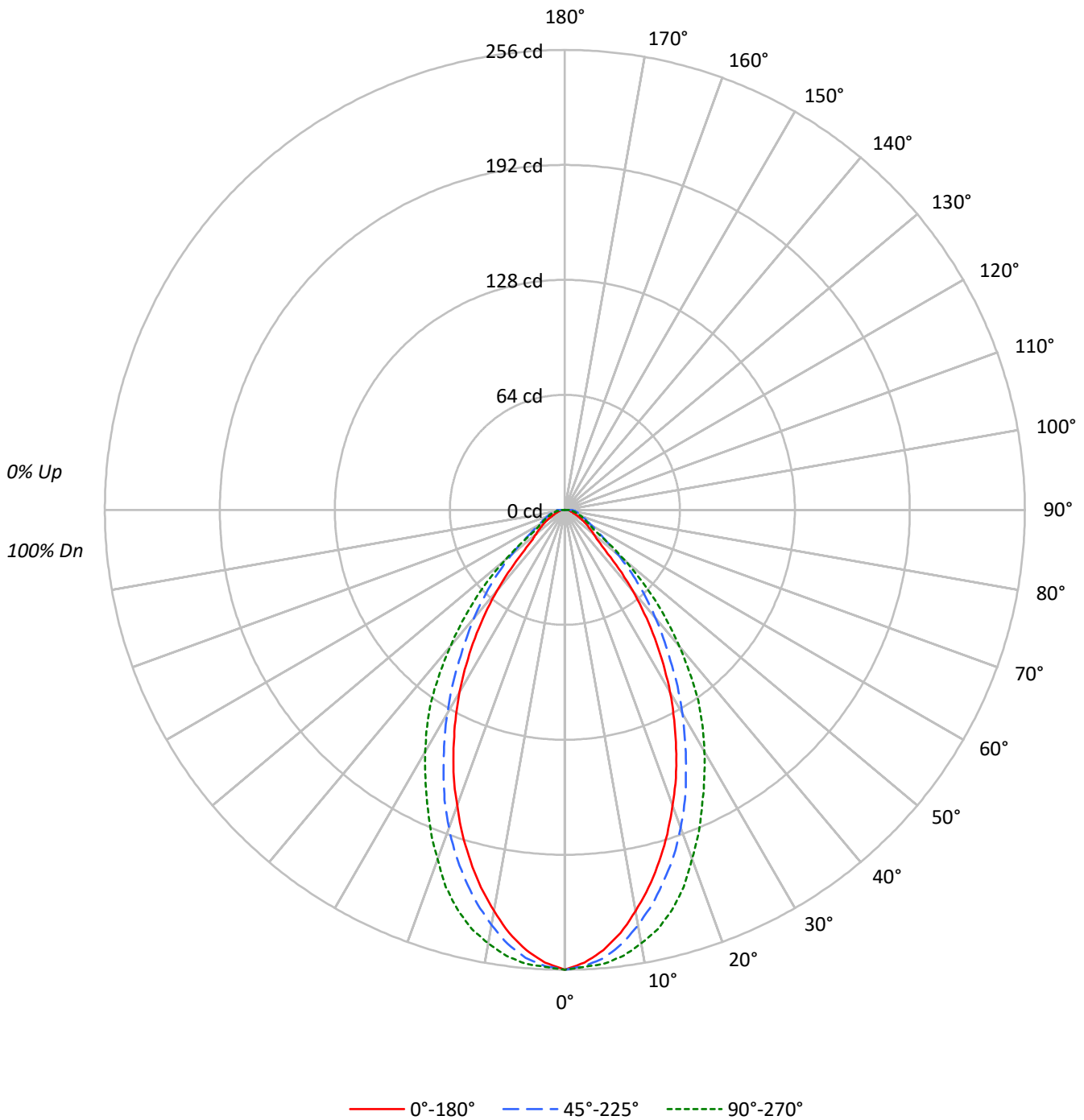
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 308.8 lumens  
Efficiency: N/A  
Efficacy: 26.4 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

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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20									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	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°	4724	4724	4724
5°	4558	4636	4697
10°	4248	4398	4592
15°	3870	4079	4403
20°	3440	3700	4063
25°	2981	3249	3683
30°	2495	2787	3311
35°	1969	2309	2915
40°	1412	1888	2390
45°	825	1490	1848
50°	597	1085	1249
55°	502	775	653
60°	402	627	557
65°	332	559	515
70°	281	534	486
75°	271	570	471
80°	298	701	499
85°	508	1101	699

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 1848 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	23.5	7.6
10°-20°	60.1	19.5
20°-30°	73.9	23.9
30°-40°	65.3	21.1
40°-50°	41.7	13.5
50°-60°	20.3	6.6
60°-70°	12.1	3.9
70°-80°	7.7	2.5
80°-90°	4.3	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°	157.4	51.0
0°-40°	222.7	72.1
0°-60°	284.7	92.2
0°-90°	308.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	308.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	256	256	256	256	256	
5°	246	251	250	251	254	23
15°	203	208	214	223	230	57
25°	146	152	160	170	181	67
35°	87	92	102	117	129	54
45°	32	41	57	64	71	27
55°	16	21	24	23	20	14
65°	8	14	13	12	12	8
75°	4	8	8	7	7	4
85°	2	5	5	5	3	2
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	256.0	256.0	256.0	256.0	256.0
2.5°	252.2	256.9	254.1	254.1	254.6
5°	246.1	251.3	250.3	251.3	253.6
7.5°	237.6	242.8	243.7	247.5	250.3
10°	226.7	231.9	234.7	240.9	245.1
12.5°	215.4	220.6	224.8	232.8	239.0
15°	202.6	208.3	213.5	222.9	230.5
17.5°	189.4	195.1	201.7	211.1	220.1
20°	175.2	180.4	188.4	197.4	206.9
22.5°	161.5	166.2	174.8	183.3	194.6
25°	146.4	151.6	159.6	169.6	180.9
27.5°	131.8	137.0	145.0	156.3	168.1
30°	117.1	121.9	130.8	142.6	155.4
32.5°	102.0	106.7	116.7	129.4	142.6
35°	87.4	92.1	102.5	116.7	129.4
37.5°	72.7	77.9	89.7	103.0	113.8
40°	58.6	64.7	78.4	89.7	99.2
42.5°	44.4	52.9	67.5	77.0	84.5
45°	31.6	40.6	57.1	64.2	70.8
47.5°	24.1	31.2	47.2	52.4	56.7
50°	20.8	25.5	37.8	41.6	43.5
52.5°	17.9	22.7	30.2	31.6	30.7
55°	15.6	20.8	24.1	22.7	20.3
57.5°	13.2	19.4	19.8	17.0	17.5
60°	10.9	17.5	17.0	14.6	15.1
62.5°	9.0	16.1	14.6	13.2	13.2
65°	7.6	14.2	12.8	11.8	11.8
67.5°	6.1	12.8	11.3	10.4	10.4
70°	5.2	11.3	9.9	9.0	9.0
72.5°	4.7	9.9	9.0	8.0	8.0
75°	3.8	8.5	8.0	7.1	6.6
77.5°	3.3	7.1	7.1	6.6	5.7
80°	2.8	6.1	6.6	5.7	4.7
82.5°	2.8	5.7	5.7	5.2	3.8
85°	2.4	4.7	5.2	4.7	3.3
87.5°	1.4	4.3	4.3	3.8	2.4
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	7.43	8.71	7.80	9.02	9.34	6.95	8.23	7.31	8.54	8.85
	3H	8.60	9.74	8.98	10.07	10.44	8.51	9.65	8.89	9.98	10.35
	4H	9.03	10.09	9.44	10.45	10.83	9.19	10.26	9.60	10.61	10.99
	6H	9.37	10.35	9.79	10.72	11.12	9.84	10.82	10.26	11.19	11.59
	8H	9.57	10.49	10.00	10.88	11.29	10.13	11.06	10.56	11.45	11.86
	12H	9.79	10.67	10.22	11.06	11.49	10.45	11.34	10.88	11.72	12.15
4H	2H	7.94	9.00	8.34	9.35	9.73	7.55	8.61	7.95	8.96	9.35
	3H	9.57	10.45	9.99	10.85	11.26	9.35	10.23	9.77	10.63	11.04
	4H	10.34	11.12	10.77	11.54	11.99	10.19	10.98	10.63	11.40	11.84
	6H	10.93	11.61	11.40	12.06	12.53	11.05	11.73	11.51	12.18	12.64
	8H	11.23	11.87	11.70	12.31	12.79	11.44	12.08	11.91	12.52	13.00
	12H	11.55	12.11	12.03	12.59	13.07	11.88	12.44	12.36	12.92	13.40
8H	4H	10.75	11.39	11.22	11.84	12.31	10.65	11.29	11.12	11.73	12.20
	6H	11.70	12.22	12.20	12.72	13.20	11.76	12.28	12.26	12.78	13.26
	8H	12.24	12.71	12.77	13.23	13.72	12.34	12.81	12.86	13.33	13.82
	12H	12.81	13.23	13.33	13.72	14.29	13.01	13.42	13.52	13.92	14.49
12H	4H	10.83	11.39	11.31	11.87	12.35	10.73	11.29	11.22	11.78	12.25
	6H	11.88	12.35	12.40	12.87	13.36	11.95	12.42	12.47	12.93	13.42
	8H	12.58	12.99	13.09	13.49	14.06	12.66	13.07	13.17	13.57	14.14