

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: P1058303

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

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1058303  
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-H290D850-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: 5000K CCT, 80 CRI LEDS  
Ballast/Driver: -

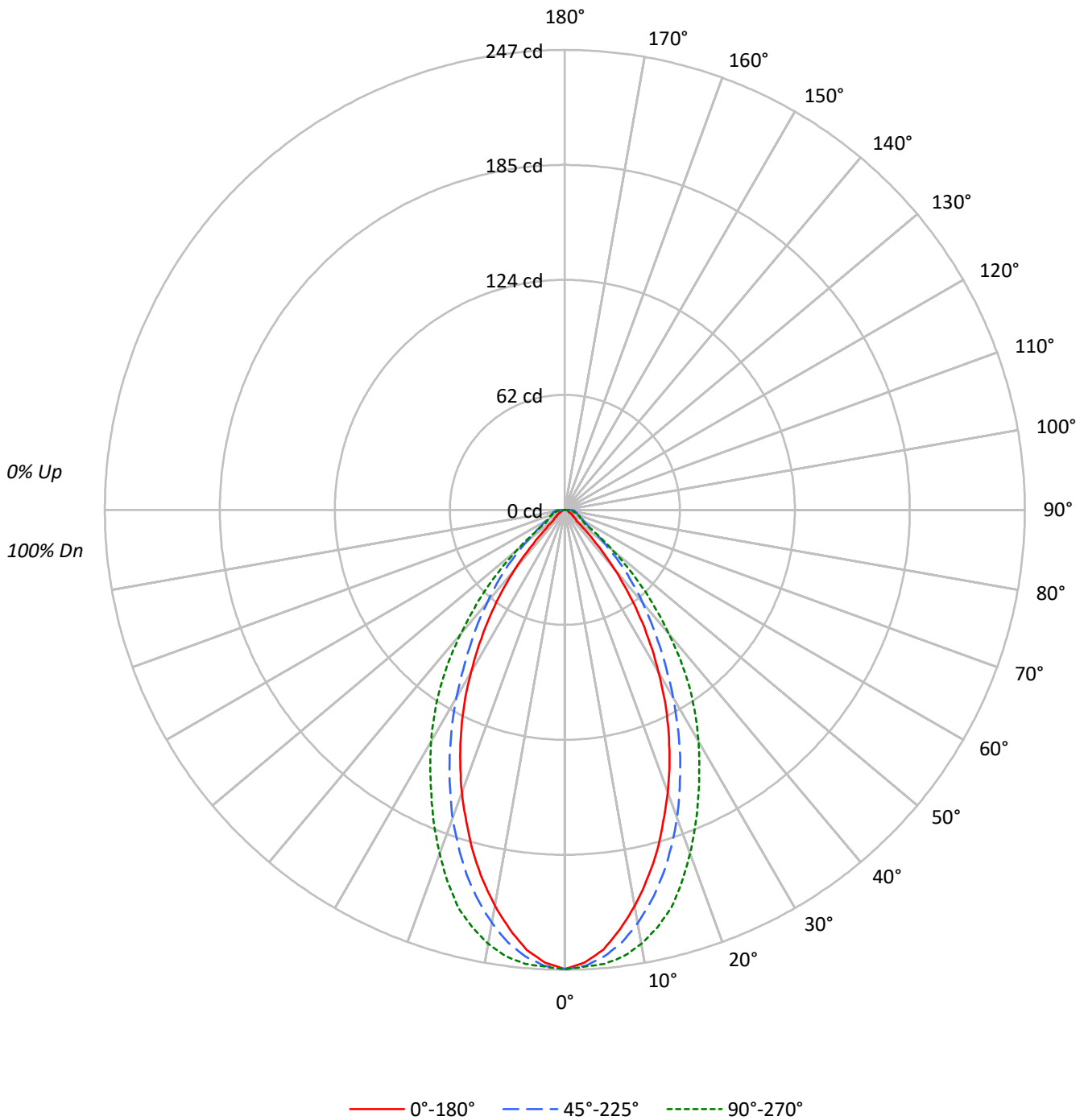
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 265.8 lumens  
Efficiency: N/A  
Efficacy: 22.7 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	0	
RCR																						
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100			100	
1	112	108	105	102	109	106	103	101	102	100	97	98	96	95	95	93	92	90			90	
2	105	99	94	90	102	97	92	89	94	90	87	91	87	85	88	85	83	81			81	
3	98	91	85	80	96	89	84	79	86	82	78	84	80	77	82	78	75	74			74	
4	92	83	77	72	90	82	76	71	80	75	70	78	73	70	76	72	69	67			67	
5	87	77	70	65	85	76	70	65	74	69	64	72	68	64	71	67	63	61			61	
6	82	72	65	60	80	71	64	59	69	63	59	68	63	59	66	62	58	57			57	
7	77	67	60	55	76	66	59	55	65	59	54	63	58	54	62	57	54	52			52	
8	73	62	55	51	72	62	55	51	61	55	50	59	54	50	58	54	50	48			48	
9	69	58	52	47	68	58	51	47	57	51	47	56	51	47	55	50	47	45			45	
10	66	55	48	44	65	54	48	44	54	48	44	53	47	44	52	47	44	42			42	

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	4550	4550	4550
5°	4392	4462	4533
10°	4045	4221	4435
15°	3637	3880	4224
20°	3173	3460	3859
25°	2683	2981	3453
30°	2143	2476	3060
35°	1586	1989	2629
40°	1002	1558	2093
45°	394	1172	1540
50°	204	787	950
55°	167	518	425
60°	122	417	384
65°	105	393	393
70°	103	410	383
75°	135	471	406
80°	202	606	457
85°	296	995	593

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 45°  
 Vertical Angle: 87.5°  
 Luminance: 1988 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	22.6	8.5
10°-20°	57.0	21.4
20°-30°	67.7	25.5
30°-40°	56.3	21.2
40°-50°	31.4	11.8
50°-60°	12.7	4.8
60°-70°	8.1	3.1
70°-80°	6.1	2.3
80°-90°	3.9	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°	147.2	55.4
0°-40°	203.5	76.6
0°-60°	247.7	93.2
0°-90°	265.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	265.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	247	247	247	247	247	
5°	237	241	241	243	245	22
15°	190	196	203	214	221	53
25°	132	137	146	158	170	60
35°	70	77	88	103	117	44
45°	15	26	45	52	59	14
55°	5	11	16	16	13	5
65°	2	9	9	8	9	2
75°	2	7	7	6	6	2
85°	1	4	5	4	3	2
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	246.6	246.6	246.6	246.6	246.6
2.5°	243.3	247.0	245.2	245.2	245.6
5°	237.1	241.4	240.9	242.8	244.7
7.5°	227.2	231.9	234.3	238.5	241.9
10°	215.9	221.1	225.3	231.9	236.7
12.5°	203.6	208.8	214.9	223.4	229.6
15°	190.4	196.0	203.1	213.5	221.1
17.5°	175.7	181.9	189.9	201.2	209.3
20°	161.6	167.7	176.2	187.5	196.5
22.5°	146.9	152.1	161.1	172.4	183.3
25°	131.8	137.0	146.4	157.8	169.6
27.5°	116.7	121.9	131.3	143.1	156.4
30°	100.6	106.3	116.2	129.4	143.6
32.5°	85.5	91.2	101.6	116.2	130.4
35°	70.4	77.0	88.3	103.0	116.7
37.5°	55.7	63.3	76.1	89.8	102.0
40°	41.6	49.6	64.7	76.5	86.9
42.5°	27.4	36.8	54.3	64.2	72.3
45°	15.1	25.5	44.9	52.4	59.0
47.5°	8.5	16.5	35.4	41.6	45.3
50°	7.1	12.3	27.4	31.6	33.1
52.5°	5.7	11.3	20.8	23.1	22.2
55°	5.2	10.9	16.1	15.6	13.2
57.5°	4.3	10.9	12.8	11.3	11.3
60°	3.3	10.4	11.3	9.9	10.4
62.5°	2.8	9.9	10.4	9.4	9.4
65°	2.4	9.4	9.0	8.5	9.0
67.5°	1.9	8.5	8.5	8.0	8.0
70°	1.9	8.0	7.6	7.1	7.1
72.5°	1.9	7.1	7.1	6.6	6.6
75°	1.9	6.6	6.6	6.1	5.7
77.5°	1.9	5.7	6.1	5.7	5.2
80°	1.9	5.2	5.7	5.2	4.3
82.5°	1.9	4.7	5.2	4.7	3.8
85°	1.4	4.3	4.7	4.3	2.8
87.5°	1.4	4.3	4.7	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	3.66	4.87	4.02	5.19	5.50	4.68	5.90	5.05	6.21	6.53
	3H	4.98	6.06	5.36	6.39	6.76	6.72	7.80	7.10	8.13	8.50
	4H	5.55	6.56	5.95	6.91	7.30	7.68	8.69	8.08	9.04	9.42
	6H	6.12	7.05	6.54	7.42	7.82	8.64	9.56	9.05	9.94	10.33
	8H	6.45	7.32	6.88	7.72	8.12	9.09	9.97	9.52	10.36	10.77
	12H	6.75	7.59	7.18	7.97	8.40	9.51	10.35	9.94	10.73	11.16
4H	2H	4.62	5.63	5.02	5.98	6.36	5.37	6.38	5.77	6.73	7.12
	3H	6.63	7.47	7.05	7.87	8.28	7.66	8.49	8.07	8.90	9.30
	4H	7.71	8.46	8.14	8.88	9.32	8.80	9.55	9.24	9.97	10.42
	6H	8.58	9.23	9.05	9.68	10.15	9.99	10.63	10.45	11.08	11.55
	8H	8.99	9.60	9.47	10.05	10.52	10.55	11.16	11.02	11.60	12.08
	12H	9.37	9.91	9.86	10.39	10.87	11.09	11.63	11.58	12.11	12.58
8H	4H	8.48	9.08	8.95	9.53	10.00	9.35	9.96	9.82	10.41	10.88
	6H	9.82	10.32	10.32	10.81	11.30	10.82	11.32	11.32	11.81	12.30
	8H	10.53	10.98	11.06	11.50	11.99	11.58	12.03	12.11	12.55	13.04
	12H	11.23	11.62	11.74	12.12	12.69	12.37	12.77	12.89	13.26	13.83
12H	4H	8.63	9.17	9.12	9.65	10.13	9.46	10.00	9.95	10.48	10.96
	6H	10.14	10.59	10.67	11.11	11.60	11.05	11.49	11.57	12.01	12.50
	8H	11.04	11.43	11.56	11.93	12.50	11.95	12.35	12.47	12.84	13.42