

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: P1058552

Luminaire Tested: S122RDR-H865D850-X4F0-XX-UDD-WVL-S

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1058552  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-58)  
Test Lab: INNOVATION CENTER  
Issue Date: 8/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S122RDR-H865D850-X4F0-XX-UDD-WVL-S  
Description: DEFINE 2 SILVER REGRESSED DIRECT RECESSED HOUSING WITH WHITE STRAIGHT BLADE LOUVER WITH DIFFUSER  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 5000K CCT, 80 CRI LEDS  
Ballast/Driver: -

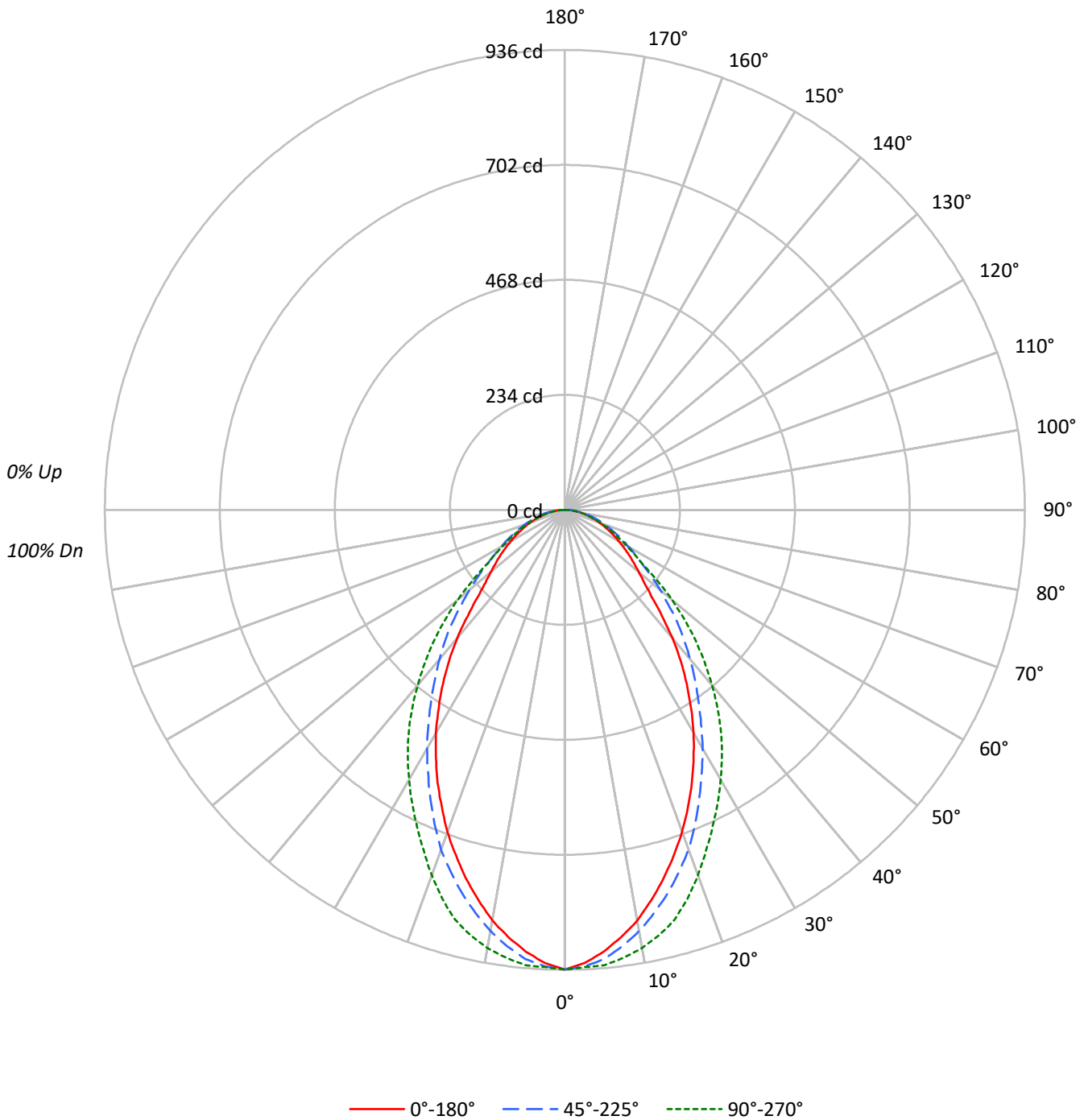
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1523.3 lumens  
Efficiency: N/A  
Efficacy: 48.8 lumens/watt  
Spacing Criteria (0/90/45): 0.91 / 1.05 / 1.05  
Luminous Opening: Rectangular (W 0.15' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 31.2  
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	110	106	103	99	108	104	101	98	100	97	95	96	94	92	93	91	89	87				
2	102	95	89	84	100	93	88	83	90	85	81	87	83	79	84	80	78	76				
3	94	85	78	73	92	84	77	72	81	75	71	78	73	69	76	72	68	66				
4	88	77	69	63	85	76	69	63	73	67	62	71	66	61	69	64	61	59				
5	81	70	62	56	79	69	61	56	67	60	55	65	59	55	63	58	54	52				
6	76	64	56	50	74	63	56	50	61	55	50	60	54	49	58	53	49	47				
7	71	59	51	45	69	58	51	45	57	50	45	55	49	45	54	49	44	43				
8	67	54	47	41	65	54	46	41	52	46	41	51	45	41	50	45	41	39				
9	63	50	43	38	61	50	43	38	49	42	38	48	42	37	47	41	37	36				
10	59	47	40	35	58	46	39	35	45	39	35	45	39	34	44	38	34	33				

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

	0°	45°	90°
0°	17262	17262	17262
5°	16724	17000	17226
10°	15900	16307	16968
15°	14836	15432	16496
20°	13704	14451	15542
25°	12466	13185	14484
30°	11167	11947	13511
35°	9727	10673	12477
40°	8209	9551	11218
45°	6519	8432	9815
50°	5612	7249	8147
55°	5112	6203	6248
60°	4661	5510	5311
65°	4270	4977	4685
70°	3955	4613	4176
75°	3679	4356	3679
80°	3464	4187	3315
85°	3451	4319	2879

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 9815 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	86.3	5.7
10°-20°	228.3	15.0
20°-30°	300.4	19.7
30°-40°	302.1	19.8
40°-50°	244.8	16.1
50°-60°	168.6	11.1
60°-70°	110.4	7.2
70°-80°	61.5	4.0
80°-90°	20.8	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°	615.0	40.4
0°-40°	917.1	60.2
0°-60°	1330.6	87.4
0°-90°	1523.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1523.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	936	936	936	936	936	
5°	903	920	918	922	930	84
15°	777	796	808	838	864	218
25°	612	629	648	676	711	281
35°	432	452	474	516	554	269
45°	250	278	323	352	376	198
55°	159	176	193	197	194	142
65°	98	117	114	109	107	98
75°	52	64	61	54	52	55
85°	16	22	20	18	14	18
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	935.5	935.5	935.5	935.5	935.5
2.5°	923.2	939.5	930.0	930.0	931.4
5°	902.9	920.5	917.8	921.9	930.0
7.5°	877.1	896.1	896.1	908.3	919.2
10°	848.6	867.6	870.3	889.3	905.6
12.5°	813.3	832.3	840.4	864.9	886.6
15°	776.6	795.6	807.8	837.7	863.5
17.5°	737.2	756.2	772.5	803.8	829.6
20°	697.9	715.5	735.9	763.0	791.5
22.5°	654.4	673.4	692.4	718.2	750.8
25°	612.3	628.6	647.6	676.1	711.4
27.5°	567.5	585.2	602.8	636.8	673.4
30°	524.1	541.7	560.7	596.0	634.1
32.5°	477.9	496.9	515.9	555.3	594.7
35°	431.8	452.1	473.8	515.9	553.9
37.5°	386.9	408.7	434.5	477.9	510.5
40°	340.8	363.9	396.5	434.5	465.7
42.5°	291.9	320.4	359.8	392.4	420.9
45°	249.8	278.3	323.1	351.6	376.1
47.5°	218.6	241.7	285.1	309.6	329.9
50°	195.5	213.2	252.5	270.2	283.8
52.5°	176.5	194.2	221.3	233.5	237.6
55°	158.9	176.5	192.8	196.9	194.2
57.5°	141.2	160.2	169.7	165.6	165.6
60°	126.3	146.6	149.3	143.9	143.9
62.5°	111.3	131.7	131.7	124.9	124.9
65°	97.8	116.8	114.0	108.6	107.3
67.5°	85.5	103.2	99.1	93.7	92.3
70°	73.3	89.6	85.5	78.7	77.4
72.5°	62.5	77.4	72.0	66.5	63.8
75°	51.6	63.8	61.1	54.3	51.6
77.5°	42.1	51.6	48.9	43.4	40.7
80°	32.6	40.7	39.4	33.9	31.2
82.5°	24.4	31.2	29.9	25.8	21.7
85°	16.3	21.7	20.4	17.7	13.6
87.5°	8.1	14.9	13.6	12.2	6.8
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	16.63	18.07	16.99	18.38	18.69	16.98	18.42	17.35	18.74	19.05
	3H	18.17	19.46	18.55	19.79	20.15	18.33	19.62	18.71	19.95	20.31
	4H	18.74	19.95	19.14	20.30	20.68	18.81	20.02	19.21	20.37	20.75
	6H	19.17	20.29	19.59	20.65	21.05	19.17	20.28	19.58	20.65	21.04
	8H	19.33	20.39	19.75	20.78	21.18	19.28	20.34	19.71	20.73	21.14
	12H	19.44	20.45	19.87	20.84	21.27	19.36	20.37	19.79	20.76	21.18
4H	2H	17.21	18.42	17.61	18.77	19.15	17.50	18.71	17.90	19.06	19.44
	3H	19.03	20.03	19.44	20.44	20.84	19.07	20.07	19.48	20.47	20.88
	4H	19.78	20.68	20.21	21.10	21.54	19.68	20.58	20.11	20.99	21.43
	6H	20.37	21.15	20.83	21.59	22.06	20.16	20.94	20.62	21.38	21.85
	8H	20.58	21.31	21.04	21.75	22.22	20.32	21.05	20.79	21.50	21.97
	12H	20.74	21.40	21.23	21.88	22.35	20.44	21.09	20.93	21.57	22.05
8H	4H	20.06	20.80	20.53	21.24	21.71	19.98	20.71	20.44	21.15	21.62
	6H	20.82	21.43	21.32	21.92	22.40	20.59	21.20	21.09	21.69	22.17
	8H	21.14	21.69	21.66	22.20	22.69	20.84	21.39	21.36	21.90	22.39
	12H	21.43	21.91	21.94	22.40	22.97	21.05	21.53	21.57	22.03	22.59
12H	4H	20.08	20.74	20.57	21.22	21.69	20.01	20.66	20.50	21.14	21.62
	6H	20.88	21.42	21.40	21.94	22.43	20.67	21.21	21.19	21.73	22.22
	8H	21.28	21.76	21.79	22.25	22.82	20.99	21.47	21.50	21.96	22.53