

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: P1058550

Luminaire Tested: S122RDR-H865D850-X4F0-XX-UDD-SVL-W

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1058550  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-56)  
Test Lab: INNOVATION CENTER  
Issue Date: 8/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S122RDR-H865D850-X4F0-XX-UDD-SVL-W  
Description: DEFINE 2 WHITE REGRESSED DIRECT RECESSED HOUSING WITH SILVER STRAIGHT BLADE  
LOUVER WITH DIFFUSER  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 5000K CCT, 80 CRI LEDS  
Ballast/Driver: -

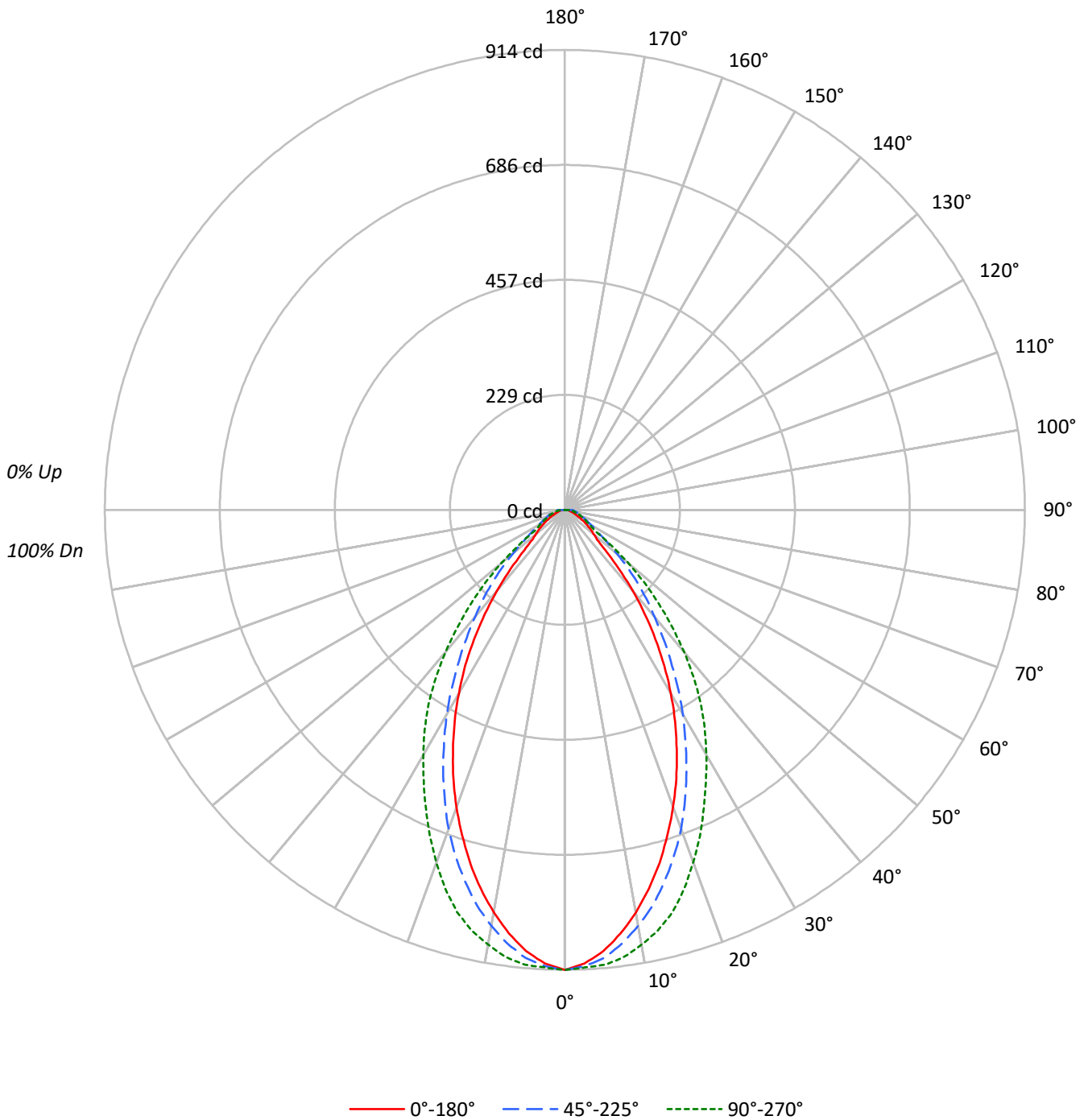
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1109.1 lumens  
Efficiency: N/A  
Efficacy: 35.5 lumens/watt  
Spacing Criteria (0/90/45): 0.83 / 0.98 / 0.95  
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				100
1	111	108	105	102	109	106	103	100	102	99	97	98	96	94	94	93	91	89				89
2	104	98	93	88	102	96	91	87	93	89	85	90	86	84	87	84	82	80				80
3	97	89	83	78	95	88	82	77	85	80	76	83	78	75	80	77	74	72				72
4	91	82	75	70	89	81	74	69	78	73	68	76	71	68	74	70	67	65				65
5	86	75	68	63	84	74	68	63	72	67	62	71	65	61	69	64	61	59				59
6	80	70	62	57	79	69	62	57	67	61	57	66	60	56	64	59	56	54				54
7	76	65	57	52	74	64	57	52	62	56	52	61	56	52	60	55	51	50				50
8	71	60	53	48	70	59	53	48	58	52	48	57	52	48	56	51	47	46				46
9	67	56	49	45	66	56	49	45	55	49	44	54	48	44	53	48	44	42				42
10	64	53	46	41	63	52	46	41	51	45	41	50	45	41	50	45	41	39				39

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

	0°	45°	90°
0°	16873	16873	16873
5°	16308	16560	16811
10°	15224	15732	16446
15°	13886	14612	15806
20°	12353	13259	14647
25°	10705	11646	13305
30°	8975	9987	11985
35°	7069	8263	10621
40°	5039	6677	8869
45°	2978	5282	6879
50°	2144	3821	4679
55°	1792	2754	2361
60°	1454	2207	2004
65°	1188	1956	1838
70°	1025	1904	1759
75°	970	1939	1747
80°	1010	2306	1881
85°	1440	3747	2308

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 6879 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	83.9	7.6
10°-20°	215.5	19.4
20°-30°	265.8	24.0
30°-40°	236.4	21.3
40°-50°	150.9	13.6
50°-60°	72.5	6.5
60°-70°	42.5	3.8
70°-80°	27.2	2.4
80°-90°	14.5	1.3
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°	565.1	51.0
0°-40°	801.5	72.3
0°-60°	1024.9	92.4
0°-90°	1109.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1109.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	914	914	914	914	914	
5°	880	897	894	899	908	82
15°	727	744	765	800	827	203
25°	526	546	572	613	654	241
35°	314	338	367	422	472	195
45°	114	148	202	235	264	96
55°	56	72	86	83	73	50
65°	27	49	45	41	42	27
75°	14	30	27	26	24	15
85°	7	16	18	15	11	7
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	914.4	914.4	914.4	914.4	914.4
2.5°	902.1	917.1	907.6	907.6	910.3
5°	880.4	896.7	894.0	899.4	907.6
7.5°	849.2	866.8	869.5	884.5	896.7
10°	812.5	831.5	839.6	861.4	877.7
12.5°	771.7	790.7	805.7	832.9	855.9
15°	726.9	744.5	764.9	800.2	827.4
17.5°	678.0	701.1	721.4	758.1	789.4
20°	629.1	650.8	675.2	710.6	745.9
22.5°	578.8	599.2	623.6	660.3	701.1
25°	525.8	546.2	572.0	612.7	653.5
27.5°	474.2	494.5	519.0	563.8	607.3
30°	421.2	441.6	468.7	514.9	562.5
32.5°	368.2	389.9	417.1	467.4	517.6
35°	313.8	338.3	366.8	422.5	471.5
37.5°	260.9	285.3	320.6	375.0	421.2
40°	209.2	237.8	277.2	326.1	368.2
42.5°	159.0	190.2	239.1	278.5	315.2
45°	114.1	148.1	202.4	235.0	263.6
47.5°	87.0	111.4	167.1	192.9	213.3
50°	74.7	89.7	133.1	152.2	163.0
52.5°	65.2	78.8	106.0	115.5	115.5
55°	55.7	72.0	85.6	82.9	73.4
57.5°	47.6	65.2	70.6	59.8	62.5
60°	39.4	59.8	59.8	53.0	54.3
62.5°	32.6	55.7	51.6	46.2	47.6
65°	27.2	48.9	44.8	40.8	42.1
67.5°	21.7	43.5	39.4	36.7	36.7
70°	19.0	39.4	35.3	32.6	32.6
72.5°	16.3	34.0	31.2	28.5	28.5
75°	13.6	29.9	27.2	25.8	24.5
77.5°	12.2	25.8	24.5	21.7	20.4
80°	9.5	21.7	21.7	20.4	17.7
82.5°	8.2	19.0	19.0	17.7	14.9
85°	6.8	16.3	17.7	14.9	10.9
87.5°	5.4	14.9	14.9	12.2	8.2
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	11.49	12.77	11.85	13.08	13.39	11.28	12.56	11.65	12.87	13.19
	3H	12.72	13.85	13.10	14.19	14.55	12.87	14.01	13.25	14.34	14.70
	4H	13.17	14.23	13.58	14.58	14.97	13.59	14.65	13.99	15.00	15.38
	6H	13.55	14.53	13.97	14.90	15.29	14.24	15.22	14.66	15.59	15.98
	8H	13.71	14.63	14.14	15.02	15.43	14.57	15.49	15.00	15.88	16.29
	12H	13.87	14.75	14.30	15.13	15.56	14.87	15.75	15.30	16.13	16.56
4H	2H	12.04	13.10	12.44	13.45	13.83	11.87	12.93	12.28	13.28	13.67
	3H	13.73	14.60	14.14	15.01	15.41	13.71	14.58	14.12	14.98	15.39
	4H	14.53	15.31	14.96	15.73	16.17	14.58	15.36	15.02	15.78	16.23
	6H	15.17	15.85	15.63	16.29	16.76	15.43	16.10	15.89	16.55	17.02
	8H	15.42	16.05	15.89	16.50	16.97	15.85	16.49	16.32	16.93	17.40
	12H	15.67	16.23	16.15	16.71	17.18	16.25	16.81	16.74	17.30	17.77
8H	4H	14.95	15.58	15.42	16.03	16.50	15.00	15.63	15.47	16.08	16.55
	6H	15.92	16.44	16.42	16.94	17.42	16.09	16.61	16.59	17.10	17.58
	8H	16.41	16.88	16.93	17.40	17.89	16.68	17.15	17.20	17.66	18.15
	12H	16.92	17.33	17.43	17.82	18.40	17.28	17.69	17.80	18.19	18.76
12H	4H	15.01	15.57	15.50	16.06	16.53	15.08	15.64	15.56	16.12	16.59
	6H	16.09	16.56	16.61	17.07	17.56	16.25	16.72	16.77	17.23	17.73
	8H	16.73	17.14	17.24	17.63	18.21	16.96	17.38	17.48	17.87	18.44