

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: P1058385

Luminaire Tested: S122RDR-H485D850-X4F0-XX-UDD-BVL-W

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1058385  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-57)  
Test Lab: INNOVATION CENTER  
Issue Date: 8/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S122RDR-H485D850-X4F0-XX-UDD-BVL-W  
Description: DEFINE 2 WHITE REGRESSED DIRECT RECESSED HOUSING WITH BLACK STRAIGHT BLADE LOUVER WITH DIFFUSER  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 5000K CCT, 80 CRI LEDS  
Ballast/Driver: -

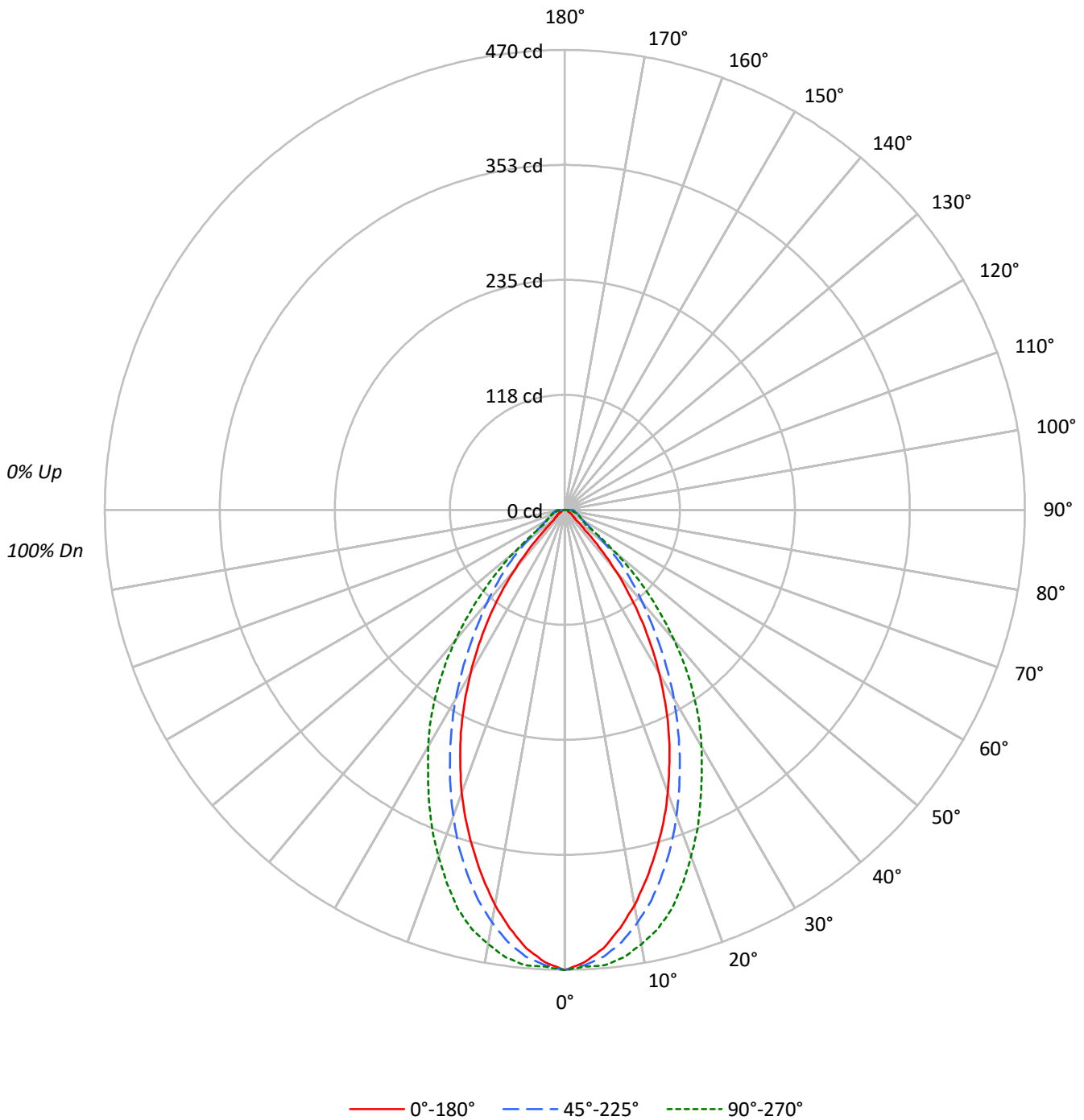
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 511.8 lumens  
Efficiency: N/A  
Efficacy: 29.4 lumens/watt  
Spacing Criteria (0/90/45): 0.78 / 0.96 / 0.91  
Luminous Opening: Rectangular (W 0.15' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 17.4  
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										
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	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	76	81	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	67	64	71	66	63	61																				
6	82	72	65	60	80	71	64	59	69	63	59	68	62	58	66	62	58	56																				
7	77	67	60	55	76	66	59	55	64	59	54	63	58	54	62	57	54	52																				
8	73	62	55	51	72	62	55	51	60	54	50	59	54	50	58	53	50	48																				
9	69	58	52	47	68	58	51	47	57	51	47	56	50	47	55	50	46	45																				
10	66	55	48	44	64	54	48	44	53	48	44	53	47	43	52	47	43	42																				

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

	0°	45°	90°
0°	8678	8678	8678
5°	8333	8487	8654
10°	7684	8021	8445
15°	6885	7359	8064
20°	6042	6545	7403
25°	5116	5652	6680
30°	4104	4745	5947
35°	3034	3796	5152
40°	1903	2972	4186
45°	746	2239	3103
50°	367	1513	1900
55°	290	991	846
60°	221	805	779
65°	166	755	755
70°	205	772	772
75°	214	856	806
80°	319	1116	882
85°	635	1905	1270

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 22.5°  
 Vertical Angle: 87.5°  
 Luminance: 3511 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	42.9	8.4
10°-20°	108.6	21.2
20°-30°	129.9	25.4
30°-40°	109.3	21.4
40°-50°	62.3	12.2
50°-60°	24.5	4.8
60°-70°	15.5	3.0
70°-80°	11.5	2.2
80°-90°	7.3	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°	281.4	55.0
0°-40°	390.8	76.3
0°-60°	477.6	93.3
0°-90°	511.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	511.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	470	470	470	470	470	
5°	450	460	458	464	467	42
15°	360	373	385	408	422	101
25°	251	263	278	306	328	114
35°	135	147	168	205	229	84
45°	29	50	86	108	119	27
55°	9	20	31	32	26	8
65°	4	17	17	17	17	4
75°	3	12	12	11	11	3
85°	3	8	9	8	6	3
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	470.3	470.3	470.3	470.3	470.3
2.5°	462.7	471.0	465.7	466.5	467.2
5°	449.9	459.7	458.2	463.5	467.2
7.5°	431.1	441.7	445.4	454.5	461.2
10°	410.1	422.1	428.1	442.4	450.7
12.5°	386.0	399.5	408.6	426.6	438.7
15°	360.4	373.2	385.2	407.8	422.1
17.5°	334.8	347.6	360.4	385.2	400.3
20°	307.7	319.8	333.3	359.7	377.0
22.5°	279.1	291.9	305.5	332.6	353.6
25°	251.3	262.6	277.6	306.2	328.1
27.5°	222.0	233.2	249.8	279.1	302.5
30°	192.6	203.9	222.7	252.8	279.1
32.5°	163.3	175.3	195.6	228.7	255.1
35°	134.7	146.7	168.5	204.7	228.7
37.5°	106.8	120.4	144.5	179.8	202.4
40°	79.0	94.8	123.4	155.0	173.8
42.5°	52.7	72.2	103.8	130.2	146.0
45°	28.6	50.4	85.8	107.6	118.9
47.5°	15.8	32.4	68.5	85.8	92.5
50°	12.8	22.6	52.7	65.5	66.2
52.5°	10.5	20.3	39.1	46.6	42.9
55°	9.0	19.6	30.8	31.6	26.3
57.5°	7.5	18.8	25.6	22.6	22.6
60°	6.0	18.8	21.8	20.3	21.1
62.5°	4.5	18.8	19.6	18.1	18.8
65°	3.8	17.3	17.3	16.6	17.3
67.5°	3.8	15.8	15.8	15.0	15.8
70°	3.8	15.0	14.3	14.3	14.3
72.5°	3.0	13.5	13.5	12.8	12.8
75°	3.0	12.0	12.0	11.3	11.3
77.5°	3.0	11.3	11.3	10.5	9.8
80°	3.0	9.8	10.5	9.8	8.3
82.5°	3.0	9.0	9.8	9.0	6.8
85°	3.0	8.3	9.0	8.3	6.0
87.5°	2.3	8.3	8.3	6.8	4.5
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	5.19	6.41	5.56	6.73	7.04	7.23	8.45	7.60	8.76	9.08
	3H	6.74	7.83	7.12	8.16	8.52	9.20	10.28	9.58	10.61	10.98
	4H	7.29	8.30	7.70	8.66	9.04	10.11	11.13	10.52	11.48	11.86
	6H	7.85	8.78	8.27	9.15	9.55	11.00	11.93	11.41	12.30	12.69
	8H	8.14	9.02	8.57	9.41	9.82	11.40	12.28	11.84	12.68	13.08
	12H	8.50	9.34	8.94	9.73	10.16	11.84	12.69	12.28	13.07	13.50
4H	2H	6.38	7.39	6.79	7.74	8.13	7.85	8.86	8.25	9.21	9.60
	3H	8.58	9.41	8.99	9.82	10.22	10.09	10.92	10.50	11.33	11.73
	4H	9.63	10.38	10.06	10.80	11.24	11.16	11.91	11.60	12.33	12.77
	6H	10.53	11.18	10.99	11.62	12.09	12.27	12.92	12.74	13.37	13.84
	8H	10.91	11.52	11.38	11.97	12.44	12.80	13.40	13.27	13.85	14.32
	12H	11.33	11.87	11.82	12.35	12.83	13.37	13.91	13.86	14.39	14.87
8H	4H	10.43	11.04	10.90	11.48	11.96	11.65	12.26	12.12	12.71	13.18
	6H	11.82	12.31	12.32	12.81	13.29	13.05	13.55	13.55	14.04	14.53
	8H	12.53	12.98	13.06	13.50	13.99	13.79	14.23	14.31	14.75	15.24
	12H	13.29	13.68	13.80	14.18	14.75	14.62	15.01	15.14	15.51	16.08
12H	4H	10.59	11.13	11.08	11.61	12.09	11.75	12.29	12.24	12.77	13.25
	6H	12.15	12.59	12.67	13.11	13.60	13.27	13.71	13.79	14.23	14.72
	8H	13.06	13.46	13.58	13.95	14.52	14.15	14.55	14.67	15.04	15.61