

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: P1058389

Luminaire Tested: S122RDR-H485D850-X4F0-XX-UDD-WVL-B

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1058389  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2406-143-19)  
Test Lab: INNOVATION CENTER  
Issue Date: 8/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S122RDR-H485D850-X4F0-XX-UDD-WVL-B  
Description: DEFINE 2 BLACK REGRESSED DIRECT RECESSED HOUSING WITH WHITE STRAIGHT BLADE LOUVER WITH DIFFUSER  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 5000K CCT, 80 CRI LEDS  
Ballast/Driver: -

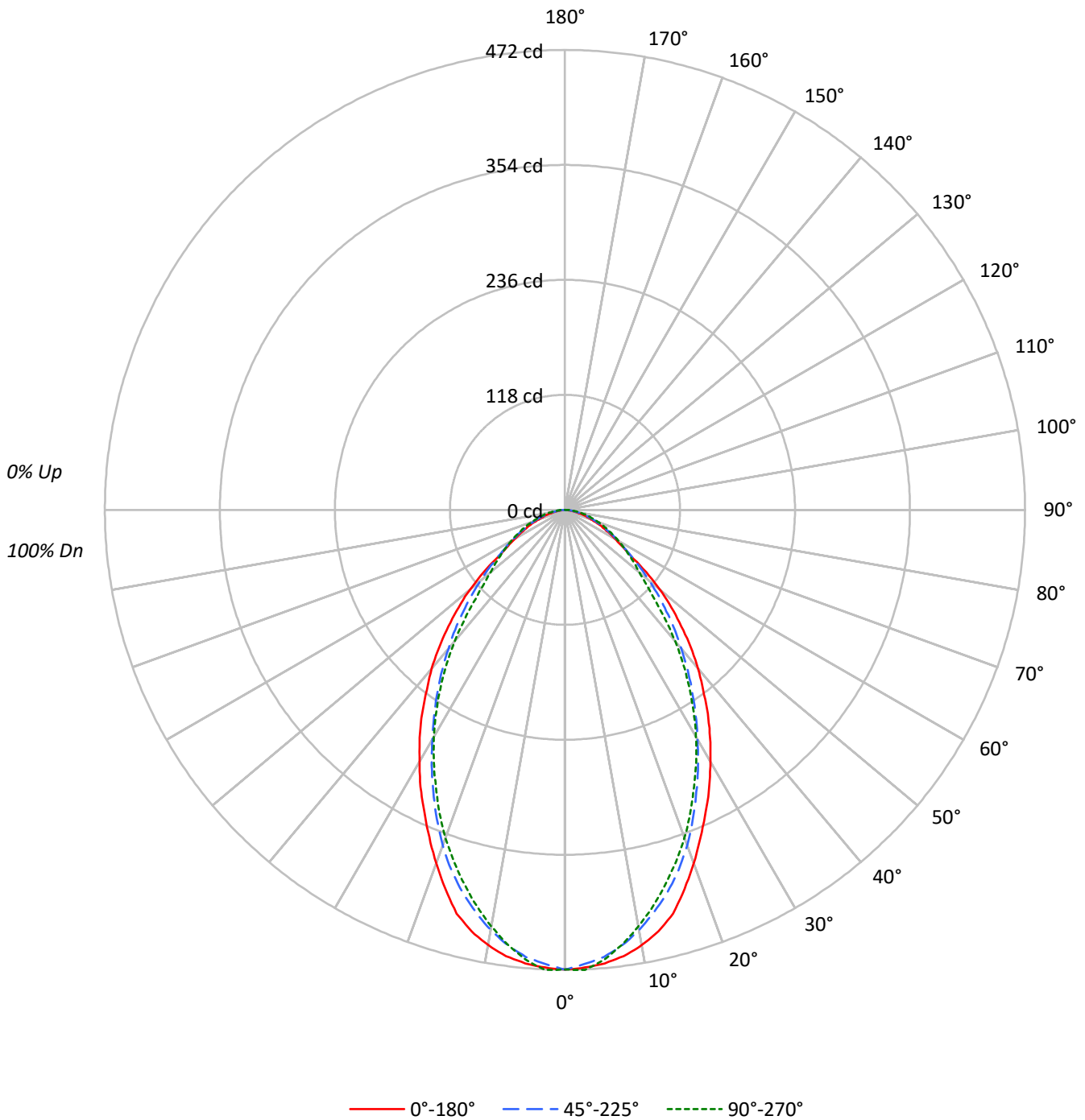
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 716.5 lumens  
Efficiency: N/A  
Efficacy: 41.2 lumens/watt  
Spacing Criteria (0/90/45): 1 / 0.92 / 1.02  
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					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	107	104	101	108	105	102	99	101	98	96	97	95	93	93	92	90	88				88
2	103	96	91	86	100	94	89	85	91	87	83	88	84	81	85	82	79	77				77
3	95	87	80	74	93	85	79	74	82	77	73	80	75	71	77	73	70	68				68
4	89	79	71	65	87	77	70	65	75	69	64	73	68	63	71	66	63	61				61
5	83	72	64	58	81	71	63	58	69	62	57	67	61	57	65	60	56	54				54
6	77	66	58	52	75	65	57	52	63	56	52	61	56	51	60	55	51	49				49
7	72	60	53	47	71	60	52	47	58	52	47	57	51	47	56	50	46	44				44
8	68	56	48	43	66	55	48	43	54	47	43	53	47	43	52	46	42	41				41
9	64	52	45	40	63	51	44	39	50	44	39	49	43	39	48	43	39	37				37
10	60	48	41	36	59	48	41	36	47	41	36	46	40	36	45	40	36	34				34

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

	0°	45°	90°
0°	8706	8706	8706
5°	8654	8530	8585
10°	8501	8205	8136
15°	8193	7764	7605
20°	7582	7199	7036
25°	6959	6501	6377
30°	6354	5793	5729
35°	5753	5127	5010
40°	5121	4468	4235
45°	4410	3841	3392
50°	3646	3235	2848
55°	2635	2683	2561
60°	2188	2299	2329
65°	1869	2000	2131
70°	1538	1786	1948
75°	1283	1497	1768
80°	956	1201	1594
85°	318	635	1440

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 4410 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	43.6	6.1
10°-20°	114.8	16.0
20°-30°	148.6	20.7
30°-40°	145.8	20.3
40°-50°	114.8	16.0
50°-60°	75.2	10.5
60°-70°	45.8	6.4
70°-80°	22.9	3.2
80°-90°	4.9	0.7
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°	307.1	42.9
0°-40°	452.8	63.2
0°-60°	642.8	89.7
0°-90°	716.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	716.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	472	472	472	472	472	
5°	467	467	460	464	464	44
15°	429	423	406	401	398	119
25°	342	330	319	318	313	157
35°	255	241	228	227	222	159
45°	169	158	147	137	130	130
55°	82	86	83	80	80	78
65°	43	44	46	48	49	43
75°	18	19	21	24	25	19
85°	2	2	3	5	7	3
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	471.8	471.8	471.8	471.8	471.8
2.5°	470.2	471.0	466.5	471.0	472.5
5°	467.2	467.2	460.5	463.5	463.5
7.5°	462.0	461.2	450.7	450.7	450.0
10°	453.7	450.7	437.9	435.7	434.2
12.5°	443.2	437.9	422.9	419.2	416.9
15°	428.9	422.9	406.4	401.1	398.1
17.5°	407.9	401.9	387.6	381.6	378.6
20°	386.1	377.1	366.6	361.3	358.3
22.5°	363.6	353.1	343.3	339.5	336.5
25°	341.8	330.5	319.3	317.8	313.2
27.5°	320.8	307.2	296.0	295.2	291.5
30°	298.2	284.0	271.9	272.7	268.9
32.5°	277.2	263.7	249.4	250.1	245.6
35°	255.4	241.1	227.6	226.9	222.4
37.5°	232.9	219.3	206.6	203.6	199.1
40°	212.6	199.1	185.5	180.3	175.8
42.5°	190.8	178.8	166.8	158.5	152.5
45°	169.0	158.5	147.2	136.7	130.0
47.5°	148.0	139.7	130.0	117.2	112.7
50°	127.0	120.9	112.7	101.4	99.2
52.5°	105.2	102.9	97.7	90.1	89.4
55°	81.9	86.4	83.4	80.4	79.6
57.5°	69.1	69.9	72.1	71.4	71.4
60°	59.3	59.3	62.3	63.1	63.1
62.5°	50.3	51.1	54.1	55.6	55.6
65°	42.8	43.6	45.8	48.1	48.8
67.5°	35.3	36.8	39.1	41.3	42.1
70°	28.5	30.0	33.1	35.3	36.1
72.5°	23.3	24.0	27.0	29.3	30.0
75°	18.0	18.8	21.0	24.0	24.8
77.5°	12.8	14.3	16.5	18.8	20.3
80°	9.0	9.8	11.3	14.3	15.0
82.5°	5.3	6.0	7.5	9.8	10.5
85°	1.5	2.3	3.0	5.3	6.8
87.5°	0.0	0.0	0.0	1.5	3.0
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	13.64	15.04	14.01	15.35	15.67	13.82	15.22	14.19	15.53	15.85
	3H	14.77	16.02	15.15	16.35	16.71	15.28	16.53	15.66	16.86	17.22
	4H	15.12	16.29	15.53	16.64	17.02	15.82	16.99	16.22	17.34	17.72
	6H	15.31	16.38	15.72	16.75	17.14	16.24	17.31	16.65	17.68	18.07
	8H	15.34	16.35	15.77	16.74	17.15	16.36	17.38	16.79	17.77	18.17
	12H	15.32	16.29	15.75	16.68	17.11	16.45	17.42	16.88	17.80	18.23
4H	2H	14.10	15.26	14.50	15.61	15.99	14.25	15.41	14.65	15.76	16.14
	3H	15.44	16.40	15.85	16.80	17.20	15.92	16.88	16.33	17.28	17.68
	4H	15.88	16.74	16.32	17.16	17.60	16.58	17.44	17.02	17.86	18.30
	6H	16.15	16.90	16.61	17.34	17.81	17.12	17.86	17.58	18.31	18.77
	8H	16.20	16.89	16.67	17.34	17.81	17.29	17.98	17.75	18.43	18.90
	12H	16.19	16.81	16.68	17.29	17.76	17.41	18.03	17.89	18.51	18.98
8H	4H	16.09	16.79	16.56	17.23	17.70	16.73	17.43	17.20	17.87	18.34
	6H	16.44	17.01	16.94	17.51	17.99	17.37	17.93	17.87	18.43	18.91
	8H	16.52	17.03	17.04	17.55	18.04	17.60	18.11	18.12	18.62	19.11
	12H	16.54	16.99	17.05	17.48	18.05	17.79	18.24	18.30	18.73	19.30
12H	4H	16.11	16.72	16.59	17.20	17.68	16.72	17.33	17.20	17.82	18.29
	6H	16.47	16.98	16.99	17.49	17.98	17.36	17.87	17.88	18.38	18.87
	8H	16.58	17.03	17.10	17.53	18.10	17.64	18.09	18.15	18.58	19.15