

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: P1058386

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

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1058386  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2406-143-20)  
Test Lab: INNOVATION CENTER  
Issue Date: 8/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S122RDR-H485D850-X4F0-XX-UDD-SVL-B  
Description: DEFINE 2 BLACK REGRESSED DIRECT RECESSED HOUSING WITH SILVER STRAIGHT BLADE  
LOUVER WITH DIFFUSER  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 5000K CCT, 80 CRI LEDS  
Ballast/Driver: -

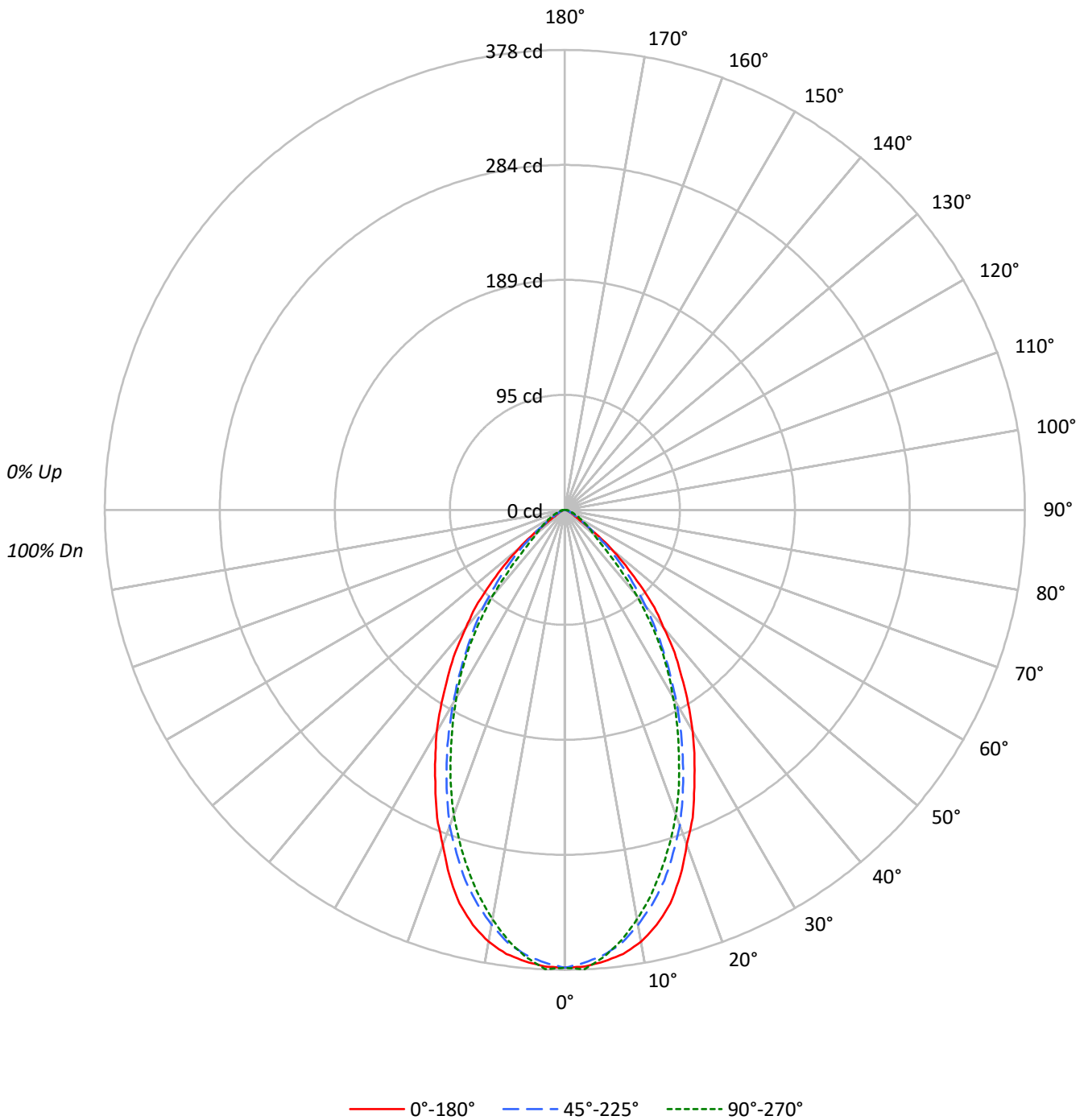
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 404.8 lumens  
Efficiency: N/A  
Efficacy: 23.3 lumens/watt  
Spacing Criteria (0/90/45): 0.93 / 0.85 / 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					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	113	110	107	104	110	107	105	103	103	101	99	100	98	96	96	95	94	92				92
2	106	101	96	92	104	99	95	91	96	92	89	92	90	87	90	87	85	84				84
3	100	93	87	82	98	91	86	82	88	84	80	86	82	79	84	80	78	76				76
4	94	85	79	74	92	84	78	74	82	77	73	80	76	72	78	74	71	70				70
5	88	79	72	68	87	78	72	67	76	71	67	74	70	66	73	69	65	64				64
6	83	73	67	62	82	72	66	62	71	65	61	69	64	61	68	64	60	59				59
7	79	68	62	57	77	68	61	57	66	60	56	65	60	56	64	59	56	54				54
8	74	64	57	53	73	63	57	52	62	56	52	61	56	52	60	55	52	50				50
9	70	60	53	49	69	59	53	49	58	52	48	57	52	48	56	52	48	47				47
10	67	56	50	45	66	56	49	45	55	49	45	54	49	45	53	48	45	43				43

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

	0°	45°	90°
0°	6944	6944	6944
5°	6902	6803	6831
10°	6755	6489	6404
15°	6400	6027	5855
20°	5752	5428	5237
25°	5123	4679	4512
30°	4481	3906	3793
35°	3773	3165	3064
40°	3040	2498	2206
45°	2273	1803	1313
50°	1424	1166	861
55°	483	627	701
60°	277	388	554
65°	196	262	428
70°	162	205	324
75°	107	164	271
80°	85	159	244
85°	0	0	169

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 2273 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	34.7	8.6
10°-20°	88.8	21.9
20°-30°	106.9	26.4
30°-40°	91.3	22.6
40°-50°	53.5	13.2
50°-60°	19.4	4.8
60°-70°	6.9	1.7
70°-80°	2.8	0.7
80°-90°	0.5	0.1
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°	230.4	56.9
0°-40°	321.7	79.5
0°-60°	394.6	97.5
0°-90°	404.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	404.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	376	376	376	376	376	
5°	373	373	367	369	369	35
15°	335	330	316	310	306	93
25°	252	241	230	226	222	115
35°	168	155	140	139	136	105
45°	87	78	69	58	50	67
55°	15	21	20	20	22	19
65°	4	5	6	8	10	5
75°	2	2	2	3	4	2
85°	0	0	0	1	1	0
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	376.3	376.3	376.3	376.3	376.3
2.5°	375.6	376.3	372.6	376.3	377.8
5°	372.6	373.3	367.3	368.8	368.8
7.5°	368.1	367.3	359.0	357.5	356.8
10°	360.5	358.3	346.3	344.0	341.8
12.5°	349.3	344.8	332.0	328.2	325.2
15°	335.0	329.7	315.5	309.5	306.5
17.5°	315.5	309.5	295.9	289.9	286.9
20°	292.9	286.9	276.4	269.7	266.7
22.5°	274.2	264.4	253.1	248.6	244.9
25°	251.6	241.1	229.8	226.1	221.6
27.5°	230.6	217.8	206.6	203.6	199.8
30°	210.3	196.8	183.3	183.3	178.0
32.5°	188.5	175.8	161.5	160.7	157.7
35°	167.5	154.7	140.5	139.0	136.0
37.5°	148.0	135.2	121.7	117.2	113.4
40°	126.2	114.9	103.7	96.1	91.6
42.5°	108.9	96.1	84.9	75.9	69.9
45°	87.1	78.1	69.1	57.8	50.3
47.5°	67.6	61.6	54.1	41.3	37.6
50°	49.6	46.6	40.6	30.8	30.0
52.5°	31.5	33.1	29.3	24.0	26.3
55°	15.0	21.0	19.5	20.3	21.8
57.5°	9.8	10.5	14.3	16.5	18.0
60°	7.5	7.5	10.5	13.5	15.0
62.5°	6.0	6.0	8.3	11.3	12.0
65°	4.5	5.3	6.0	8.3	9.8
67.5°	3.8	3.8	4.5	6.8	7.5
70°	3.0	3.0	3.8	5.3	6.0
72.5°	2.3	2.3	3.0	4.5	4.5
75°	1.5	2.3	2.3	3.0	3.8
77.5°	1.5	1.5	1.5	2.3	3.0
80°	0.8	0.8	1.5	1.5	2.3
82.5°	0.8	0.8	0.8	0.8	1.5
85°	0.0	0.0	0.0	0.8	0.8
87.5°	0.0	0.0	0.0	0.0	0.0
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	2.61	3.77	2.98	4.09	4.40	6.00	7.16	6.37	7.48	7.79
	3H	3.14	4.16	3.52	4.49	4.86	6.74	7.76	7.12	8.09	8.46
	4H	3.28	4.23	3.69	4.58	4.97	6.96	7.90	7.36	8.26	8.64
	6H	3.36	4.22	3.77	4.60	4.99	7.11	7.98	7.53	8.35	8.75
	8H	3.37	4.19	3.80	4.58	4.99	7.14	7.96	7.58	8.35	8.76
	12H	3.34	4.12	3.77	4.50	4.93	7.15	7.93	7.58	8.31	8.74
4H	2H	2.92	3.87	3.32	4.22	4.61	5.97	6.92	6.37	7.27	7.66
	3H	3.59	4.36	4.00	4.76	5.17	6.85	7.62	7.27	8.03	8.43
	4H	3.84	4.52	4.28	4.95	5.39	7.14	7.82	7.57	8.24	8.69
	6H	3.97	4.55	4.43	5.00	5.47	7.37	7.95	7.83	8.40	8.87
	8H	3.99	4.54	4.46	4.99	5.46	7.41	7.96	7.89	8.41	8.88
	12H	3.96	4.44	4.45	4.92	5.40	7.44	7.92	7.93	8.40	8.88
8H	4H	3.95	4.50	4.42	4.94	5.42	7.07	7.61	7.54	8.06	8.54
	6H	4.13	4.57	4.63	5.07	5.55	7.33	7.78	7.84	8.28	8.76
	8H	4.18	4.58	4.71	5.10	5.59	7.40	7.80	7.93	8.32	8.81
	12H	4.17	4.51	4.68	5.01	5.59	7.47	7.82	7.99	8.32	8.89
12H	4H	3.94	4.41	4.42	4.90	5.38	7.02	7.50	7.51	7.98	8.46
	6H	4.13	4.52	4.65	5.04	5.54	7.29	7.68	7.81	8.20	8.69
	8H	4.21	4.56	4.73	5.06	5.63	7.38	7.72	7.90	8.22	8.80