

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: P1058429

Luminaire Tested: S122RDR-H485D950-X4F0-XX-UDD-BVL-S

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1058429  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-60)  
Test Lab: INNOVATION CENTER  
Issue Date: 8/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S122RDR-H485D950-X4F0-XX-UDD-BVL-S  
Description: DEFINE 2 SILVER REGRESSED DIRECT RECESSED HOUSING WITH BLACK STRAIGHT BLADE LOUVER WITH DIFFUSER  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 5000K CCT, 90 CRI LEDS  
Ballast/Driver: -

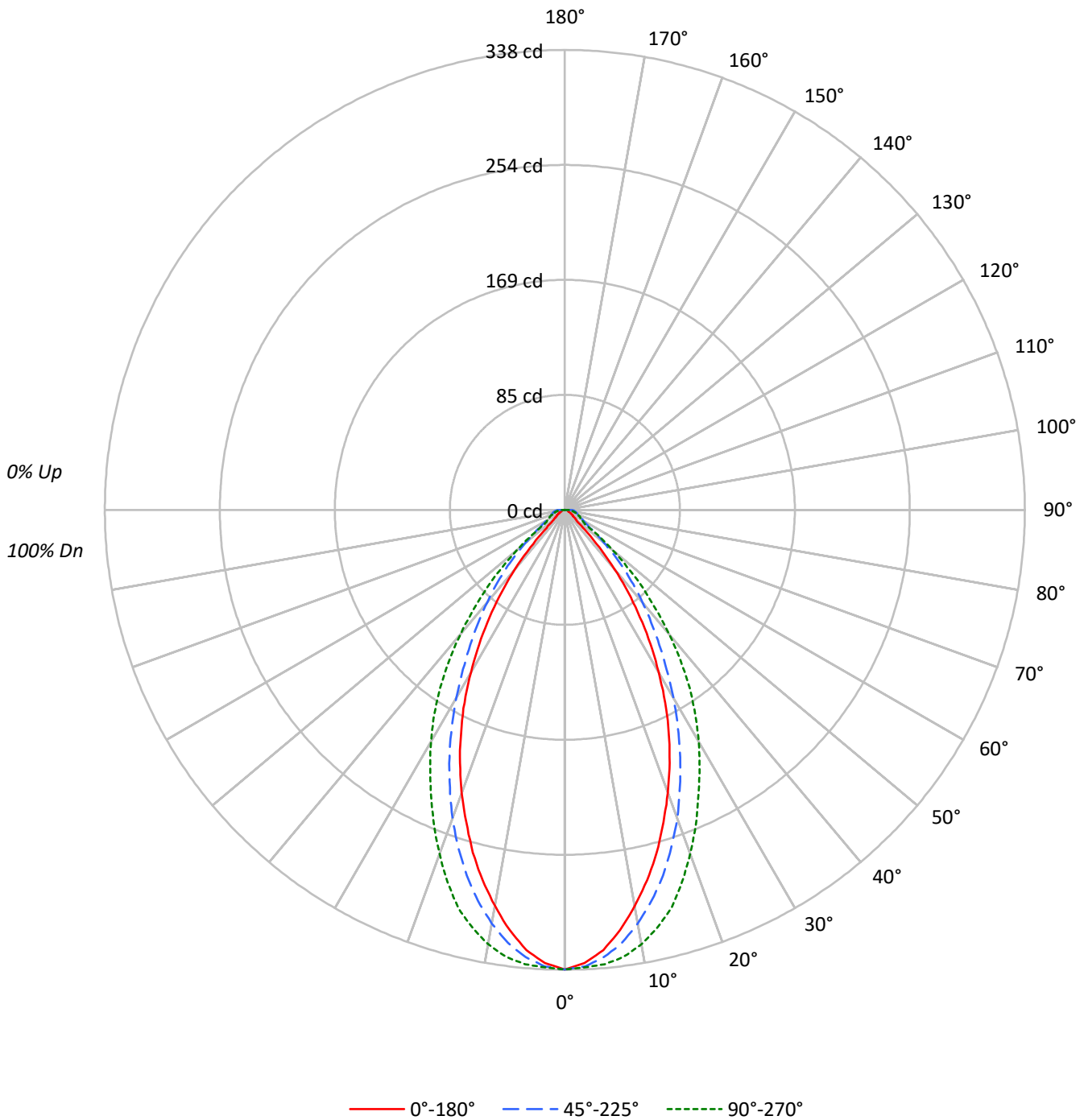
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 364.1 lumens  
Efficiency: N/A  
Efficacy: 20.9 lumens/watt  
Spacing Criteria (0/90/45): 0.79 / 0.95 / 0.9  
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									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	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	77	82	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	68	64	71	67	63	61																												
6	82	72	65	60	80	71	64	59	69	63	59	68	63	59	66	62	58	57																												
7	77	67	60	55	76	66	59	55	65	59	54	63	58	54	62	57	54	52																												
8	73	62	55	51	72	62	55	51	61	55	50	59	54	50	58	54	50	48																												
9	69	58	52	47	68	58	51	47	57	51	47	56	51	47	55	50	47	45																												
10	66	55	48	44	65	54	48	44	54	48	44	53	47	44	52	47	44	42																												

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

	0°	45°	90°
0°	6233	6233	6233
5°	6016	6113	6209
10°	5541	5784	6075
15°	4982	5316	5785
20°	4346	4740	5286
25°	3675	4084	4730
30°	2936	3392	4191
35°	2172	2726	3600
40°	1371	2137	2869
45°	540	1605	2111
50°	278	1077	1300
55°	228	708	582
60°	166	572	524
65°	140	537	537
70°	140	561	523
75°	185	649	556
80°	276	829	616
85°	402	1376	826

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 45°  
 Vertical Angle: 87.5°  
 Luminance: 2750 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	30.9	8.5
10°-20°	78.0	21.4
20°-30°	92.7	25.5
30°-40°	77.1	21.2
40°-50°	43.1	11.8
50°-60°	17.4	4.8
60°-70°	11.1	3.1
70°-80°	8.4	2.3
80°-90°	5.3	1.5
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°	201.7	55.4
0°-40°	278.8	76.6
0°-60°	339.3	93.2
0°-90°	364.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	364.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	338	338	338	338	338	
5°	325	331	330	333	335	30
15°	261	269	278	292	303	73
25°	180	188	201	216	232	82
35°	96	106	121	141	160	60
45°	21	35	62	72	81	19
55°	7	15	22	21	18	6
65°	3	13	12	12	12	3
75°	3	9	9	8	8	3
85°	2	6	6	6	4	2
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	337.8	337.8	337.8	337.8	337.8
2.5°	333.3	338.4	335.9	335.9	336.5
5°	324.8	330.7	330.0	332.6	335.2
7.5°	311.3	317.7	321.0	326.8	331.3
10°	295.7	302.8	308.7	317.7	324.2
12.5°	278.9	286.0	294.4	306.1	314.5
15°	260.8	268.6	278.3	292.5	302.8
17.5°	240.7	249.1	260.1	275.7	286.7
20°	221.3	229.7	241.4	256.9	269.2
22.5°	201.3	208.4	220.7	236.2	251.1
25°	180.5	187.7	200.6	216.1	232.3
27.5°	159.8	167.0	179.9	196.1	214.2
30°	137.8	145.6	159.2	177.3	196.7
32.5°	117.1	124.9	139.1	159.2	178.6
35°	96.4	105.5	121.0	141.1	159.8
37.5°	76.4	86.7	104.2	123.0	139.8
40°	56.9	67.9	88.7	104.8	119.1
42.5°	37.5	50.5	74.4	88.0	99.0
45°	20.7	34.9	61.5	71.8	80.9
47.5°	11.6	22.6	48.5	56.9	62.1
50°	9.7	16.8	37.5	43.4	45.3
52.5°	7.8	15.5	28.5	31.7	30.4
55°	7.1	14.9	22.0	21.4	18.1
57.5°	5.8	14.9	17.5	15.5	15.5
60°	4.5	14.2	15.5	13.6	14.2
62.5°	3.9	13.6	14.2	12.9	12.9
65°	3.2	12.9	12.3	11.6	12.3
67.5°	2.6	11.6	11.6	11.0	11.0
70°	2.6	11.0	10.4	9.7	9.7
72.5°	2.6	9.7	9.7	9.1	9.1
75°	2.6	9.1	9.1	8.4	7.8
77.5°	2.6	7.8	8.4	7.8	7.1
80°	2.6	7.1	7.8	7.1	5.8
82.5°	2.6	6.5	7.1	6.5	5.2
85°	1.9	5.8	6.5	5.8	3.9
87.5°	1.9	5.8	6.5	5.2	3.2
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	4.73	5.95	5.09	6.26	6.57	5.79	7.00	6.15	7.32	7.63
	3H	6.06	7.14	6.44	7.47	7.84	7.82	8.90	8.20	9.23	9.60
	4H	6.63	7.64	7.04	7.99	8.38	8.78	9.79	9.19	10.14	10.53
	6H	7.20	8.13	7.62	8.50	8.90	9.73	10.66	10.14	11.03	11.42
	8H	7.53	8.41	7.96	8.80	9.21	10.18	11.06	10.61	11.45	11.86
	12H	7.83	8.67	8.26	9.06	9.49	10.60	11.45	11.04	11.83	12.26
4H	2H	5.69	6.70	6.09	7.05	7.44	6.47	7.48	6.87	7.83	8.21
	3H	7.72	8.55	8.13	8.95	9.36	8.75	9.59	9.17	9.99	10.40
	4H	8.80	9.55	9.24	9.97	10.42	9.91	10.66	10.34	11.08	11.52
	6H	9.68	10.32	10.14	10.77	11.24	11.08	11.72	11.54	12.17	12.64
	8H	10.09	10.69	10.56	11.14	11.61	11.64	12.25	12.11	12.69	13.16
	12H	10.46	11.00	10.95	11.48	11.96	12.19	12.72	12.67	13.21	13.68
8H	4H	9.57	10.18	10.05	10.63	11.10	10.46	11.07	10.93	11.51	11.99
	6H	10.92	11.41	11.42	11.91	12.39	11.91	12.41	12.42	12.91	13.39
	8H	11.63	12.08	12.16	12.60	13.09	12.68	13.13	13.20	13.64	14.14
	12H	12.32	12.71	12.83	13.21	13.78	13.47	13.86	13.98	14.36	14.93
12H	4H	9.73	10.27	10.22	10.75	11.22	10.57	11.10	11.05	11.59	12.06
	6H	11.24	11.68	11.76	12.20	12.69	12.14	12.59	12.66	13.10	13.60
	8H	12.14	12.53	12.66	13.03	13.60	13.05	13.44	13.57	13.94	14.51