

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: P1059602

Luminaire Tested: S123RDR-H340D850-X4F0-XX-UDD-SVL-S

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1059602  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-68)  
Test Lab: INNOVATION CENTER  
Issue Date: 8/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123RDR-H340D850-X4F0-XX-UDD-SVL-S  
Description: DEFINE 3 SILVER REGRESSED DIRECT RECESSED HOUSING WITH SILVER STRAIGHT BLADE  
LOUVER WITH DIFFUSER  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 5000K CCT, 80 CRI LEDS  
Ballast/Driver: -

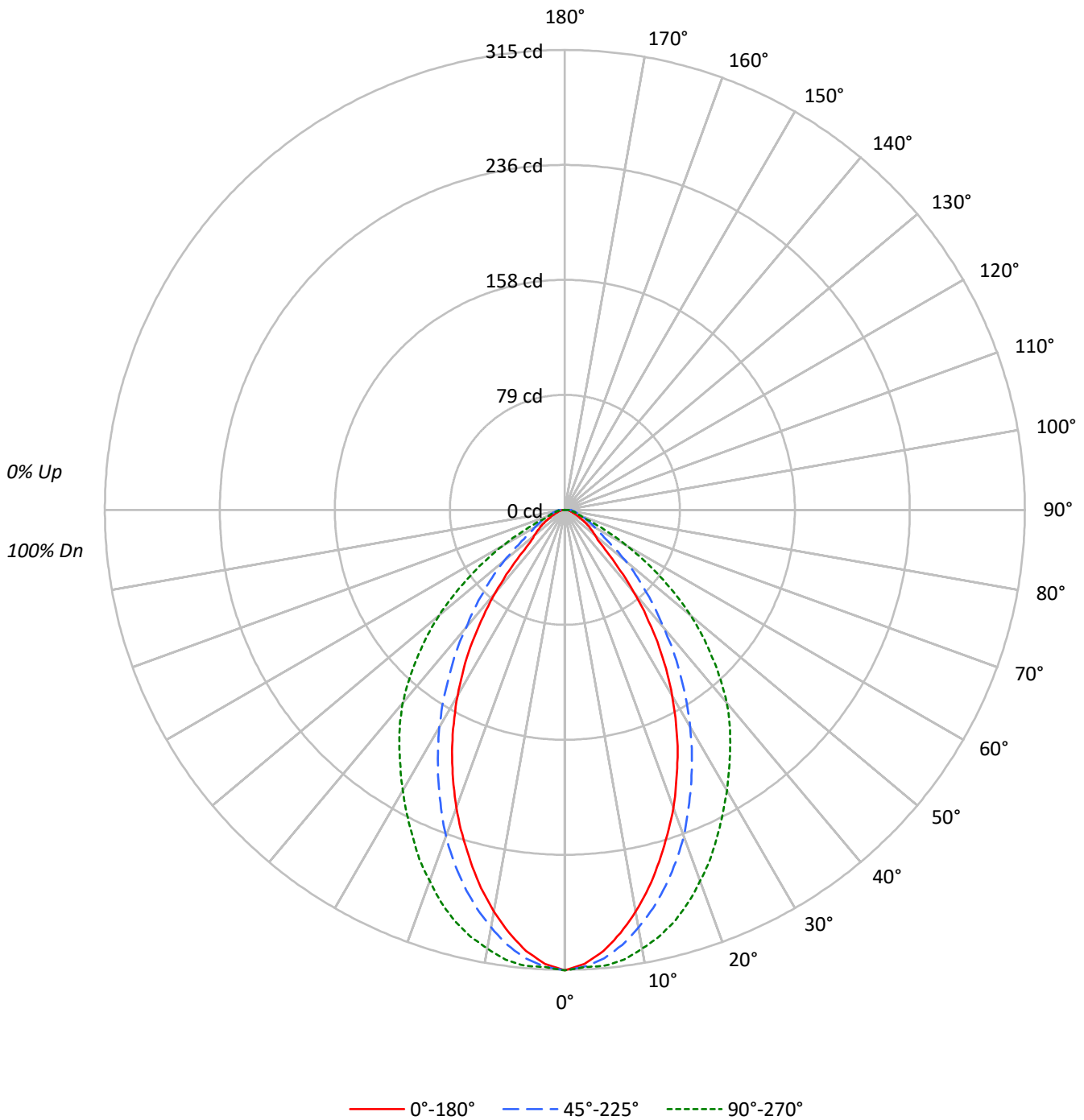
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 422.3 lumens  
Efficiency: N/A  
Efficacy: 36.1 lumens/watt  
Spacing Criteria (0/90/45): 0.83 / 1.07 / 0.98  
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 11.7  
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	111	108	105	102	109	106	103	100	101	99	97	98	96	94	94	93	91	89																												
2	104	98	92	88	102	96	91	87	92	88	85	89	86	83	86	84	81	79																												
3	97	89	82	77	95	87	81	77	84	79	75	82	78	74	79	76	73	71																												
4	91	81	74	69	88	80	73	68	77	72	67	75	70	66	73	69	66	64																												
5	85	74	67	61	83	73	66	61	71	65	61	69	64	60	68	63	59	58																												
6	79	68	61	56	78	67	60	55	66	60	55	64	59	54	63	58	54	52																												
7	74	63	56	51	73	62	55	50	61	55	50	60	54	50	58	53	49	48																												
8	70	59	51	46	69	58	51	46	57	50	46	56	50	46	54	49	45	44																												
9	66	54	47	43	65	54	47	43	53	47	42	52	46	42	51	46	42	40																												
10	62	51	44	39	61	50	44	39	50	43	39	49	43	39	48	43	39	37																												

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

	0°	45°	90°
0°	3704	3704	3704
5°	3576	3636	3695
10°	3331	3464	3639
15°	3033	3241	3542
20°	2715	2974	3383
25°	2368	2655	3198
30°	1992	2328	3009
35°	1584	1974	2831
40°	1130	1610	2646
45°	673	1292	2370
50°	497	985	2051
55°	416	669	1630
60°	336	552	1146
65°	270	472	614
70°	220	412	378
75°	209	395	354
80°	216	433	345
85°	310	620	431

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 2370 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	29.0	6.9
10°-20°	75.3	17.8
20°-30°	96.0	22.7
30°-40°	90.3	21.4
40°-50°	64.9	15.4
50°-60°	37.2	8.8
60°-70°	17.0	4.0
70°-80°	8.5	2.0
80°-90°	4.2	1.0
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°	200.2	47.4
0°-40°	290.5	68.8
0°-60°	392.6	93.0
0°-90°	422.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	422.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	315	315	315	315	315	
5°	303	309	308	311	314	28
15°	250	258	267	281	291	70
25°	183	191	205	227	247	83
35°	110	118	138	169	198	68
45°	40	49	78	115	143	34
55°	20	21	33	60	80	18
65°	10	13	17	19	22	10
75°	5	9	9	8	8	5
85°	2	5	5	4	3	2
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	315.4	315.4	315.4	315.4	315.4
2.5°	311.2	315.8	313.1	313.1	313.5
5°	303.4	309.4	308.5	310.8	313.5
7.5°	292.3	298.8	300.6	306.2	310.8
10°	279.4	286.8	290.5	299.2	305.2
12.5°	265.2	273.5	279.4	290.5	299.2
15°	249.5	258.3	266.6	280.8	291.4
17.5°	233.4	242.2	252.7	269.3	281.8
20°	217.3	226.0	238.0	255.5	270.7
22.5°	199.8	208.6	221.4	241.2	259.7
25°	182.8	191.1	204.9	227.0	246.8
27.5°	164.8	173.1	188.3	212.2	234.3
30°	146.9	155.1	171.7	197.5	221.9
32.5°	128.9	136.7	154.7	183.2	209.5
35°	110.5	118.3	137.7	169.0	197.5
37.5°	91.6	99.4	122.0	156.1	185.5
40°	73.7	82.4	105.0	143.2	172.6
42.5°	56.2	65.4	91.2	129.4	157.9
45°	40.5	49.3	77.8	114.6	142.7
47.5°	30.8	35.4	65.8	99.9	128.0
50°	27.2	27.6	53.9	86.6	112.3
52.5°	23.5	23.9	41.9	73.7	95.8
55°	20.3	20.7	32.7	60.3	79.6
57.5°	17.0	18.0	26.7	47.9	64.0
60°	14.3	16.1	23.5	36.4	48.8
62.5°	11.5	14.7	20.3	26.7	35.0
65°	9.7	13.4	17.0	18.9	22.1
67.5°	7.8	12.4	14.3	13.4	13.4
70°	6.4	11.0	12.0	11.0	11.0
72.5°	5.5	10.6	10.1	9.2	9.2
75°	4.6	9.2	8.7	7.8	7.8
77.5°	4.1	7.8	7.4	6.9	6.4
80°	3.2	6.4	6.4	6.0	5.1
82.5°	2.8	5.5	5.5	5.1	4.1
85°	2.3	4.6	4.6	4.1	3.2
87.5°	1.8	4.1	4.1	3.7	2.3
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	4.54	5.86	4.91	6.17	6.49	11.76	13.08	12.12	13.39	13.70
	3H	5.93	7.10	6.31	7.43	7.79	12.00	13.16	12.37	13.49	13.86
	4H	6.49	7.58	6.89	7.93	8.31	12.10	13.19	12.50	13.54	13.92
	6H	6.94	7.95	7.36	8.32	8.71	12.21	13.21	12.62	13.58	13.97
	8H	7.13	8.08	7.56	8.47	8.88	12.25	13.20	12.68	13.59	14.00
	12H	7.33	8.23	7.76	8.62	9.05	12.30	13.21	12.74	13.59	14.03
4H	2H	5.61	6.70	6.01	7.05	7.43	11.72	12.81	12.12	13.16	13.54
	3H	7.29	8.18	7.70	8.59	8.99	12.09	12.98	12.50	13.38	13.79
	4H	8.12	8.92	8.56	9.34	9.79	12.27	13.07	12.70	13.49	13.93
	6H	8.78	9.47	9.24	9.91	10.38	12.49	13.18	12.95	13.63	14.10
	8H	9.03	9.68	9.50	10.12	10.60	12.59	13.24	13.06	13.68	14.16
	12H	9.29	9.86	9.78	10.34	10.82	12.71	13.28	13.19	13.76	14.23
8H	4H	8.56	9.20	9.03	9.65	10.12	12.31	12.96	12.78	13.41	13.88
	6H	9.50	10.03	10.00	10.53	11.01	12.65	13.18	13.15	13.67	14.15
	8H	9.97	10.44	10.49	10.96	11.45	12.84	13.31	13.36	13.83	14.32
	12H	10.45	10.87	10.96	11.36	11.94	13.07	13.49	13.58	13.98	14.55
12H	4H	8.62	9.19	9.10	9.67	10.15	12.31	12.88	12.79	13.36	13.83
	6H	9.65	10.13	10.17	10.64	11.13	12.67	13.15	13.19	13.66	14.16
	8H	10.24	10.66	10.76	11.16	11.73	12.93	13.36	13.45	13.85	14.42