

Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269



Scaled data based on original data using  
LM-79-2024 Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P1059195

Luminaire Tested: S123RDRP-S340D850-X4F0-XX-UDD-BVL-W

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1059195  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-66)  
Test Lab: INNOVATION CENTER  
Issue Date: 8/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123RDRP-S340D850-X4F0-XX-UDD-BVL-W  
Description: DEFINE 3 WHITE REGRESSED DIRECT RECESSED HOUSING WITH BLACK STRAIGHT BLADE  
LOUVER WITH DIFFUSER  
CORE LIGHT ENGINE  
Light Source: 5000K CCT, 80 CRI LEDS  
Ballast/Driver: -

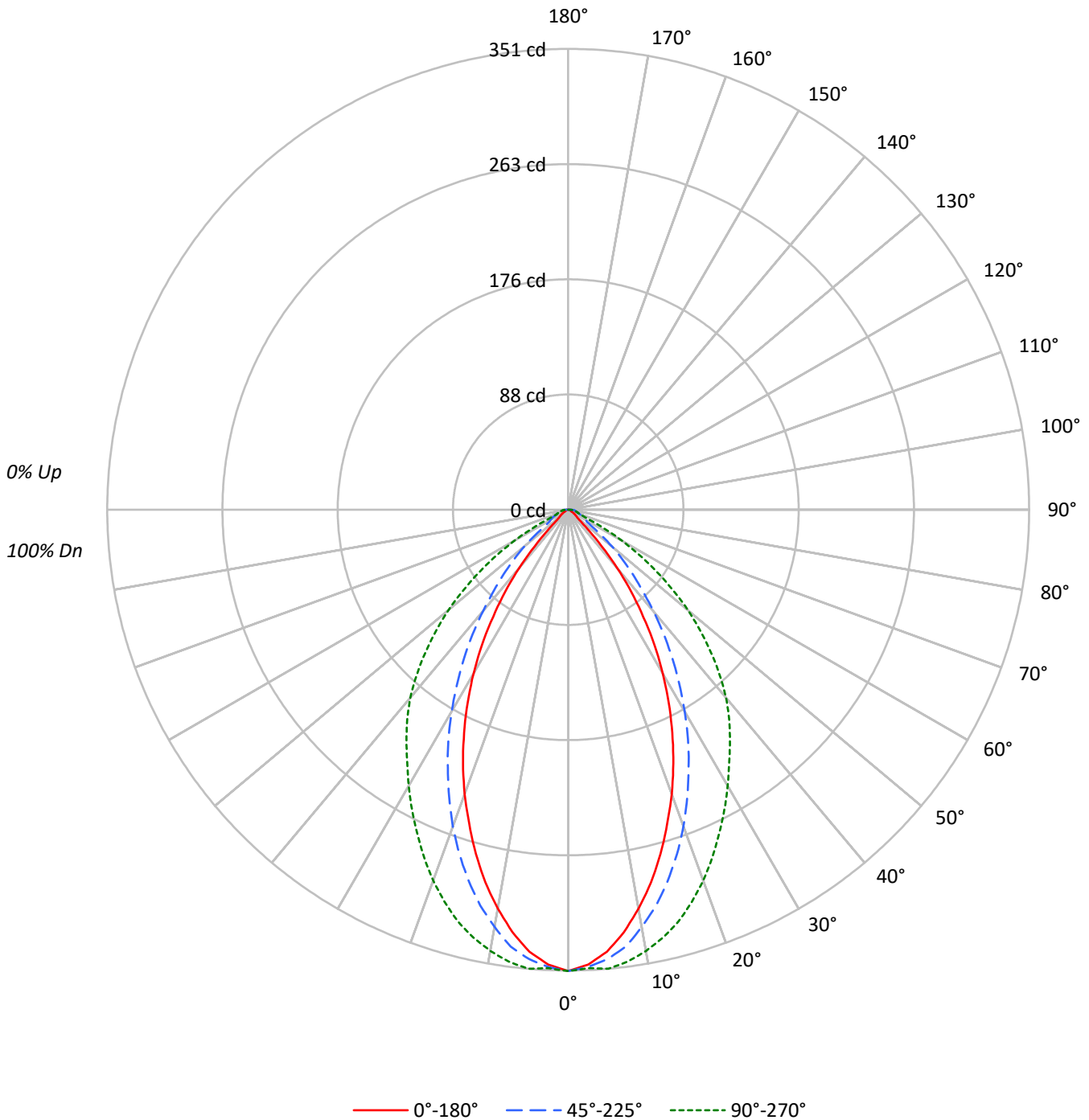
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 421.8 lumens  
Efficiency: N/A  
Efficacy: 33.7 lumens/watt  
Spacing Criteria (0/90/45): 0.79 / 1.06 / 0.94  
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 12.5  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): 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	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	98	98	96	95	95	93	92	90
2	105	99	94	90	102	97	92	88	94	90	87	91	87	85	88	85	83	81
3	98	90	84	79	96	89	83	79	86	81	77	83	79	76	81	78	75	73
4	92	83	76	71	90	81	75	70	79	74	70	77	72	69	75	71	68	66
5	86	76	69	64	84	75	69	64	73	67	63	71	66	62	70	65	62	60
6	81	70	63	58	79	69	63	58	68	62	57	66	61	57	65	60	57	55
7	76	65	58	53	75	65	58	53	63	57	53	62	56	52	61	56	52	50
8	72	61	54	49	70	60	53	49	59	53	49	58	52	48	57	52	48	47
9	68	57	50	45	67	56	50	45	55	49	45	54	49	45	53	48	45	43
10	64	53	46	42	63	53	46	42	52	46	42	51	45	42	50	45	42	40

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

	0°	45°	90°
0°	4126	4126	4126
5°	3984	4049	4136
10°	3677	3848	4068
15°	3301	3558	3946
20°	2879	3208	3756
25°	2429	2812	3524
30°	1954	2404	3293
35°	1429	1980	3078
40°	892	1544	2866
45°	337	1151	2554
50°	161	793	2176
55°	123	434	1683
60°	87	369	1106
65°	64	320	461
70°	62	302	302
75°	82	313	313
80°	122	372	345
85°	243	620	498

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 2554 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	32.3	7.6
10°-20°	82.7	19.6
20°-30°	102.4	24.3
30°-40°	91.8	21.8
40°-50°	60.2	14.3
50°-60°	30.1	7.1
60°-70°	11.7	2.8
70°-80°	6.6	1.6
80°-90°	4.1	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°	217.3	51.5
0°-40°	309.1	73.3
0°-60°	399.4	94.7
0°-90°	421.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	421.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	351	351	351	351	351	
5°	338	344	344	347	351	31
15°	272	283	293	312	325	76
25°	188	199	217	248	272	86
35°	100	113	138	180	215	62
45°	20	33	69	119	154	19
55°	6	7	21	58	82	6
65°	2	7	12	15	17	2
75°	2	7	7	7	7	2
85°	2	5	5	5	4	2
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	351.4	351.4	351.4	351.4	351.4
2.5°	346.8	351.8	348.6	349.1	349.5
5°	338.0	343.5	343.5	347.2	350.9
7.5°	324.6	331.1	335.7	342.1	347.2
10°	308.4	316.3	322.7	334.3	341.2
12.5°	290.9	300.6	308.9	324.1	333.8
15°	271.5	282.6	292.7	312.1	324.6
17.5°	250.7	261.8	275.2	297.8	313.1
20°	230.4	241.5	256.7	282.1	300.6
22.5°	209.2	220.7	236.9	265.0	286.7
25°	187.5	199.0	217.0	247.9	272.0
27.5°	165.8	177.3	197.6	231.3	257.6
30°	144.1	155.6	177.3	213.3	242.9
32.5°	122.4	134.8	157.4	196.7	228.1
35°	99.7	113.1	138.1	179.6	214.7
37.5°	79.0	91.4	119.6	164.8	201.3
40°	58.2	71.6	100.7	150.5	187.0
42.5°	37.9	52.2	83.6	134.8	170.8
45°	20.3	32.8	69.3	118.7	153.8
47.5°	11.1	18.0	55.9	101.6	136.2
50°	8.8	10.2	43.4	86.8	119.1
52.5°	7.4	8.3	30.9	73.0	100.2
55°	6.0	7.4	21.2	58.2	82.2
57.5°	5.1	6.5	16.6	45.2	64.2
60°	3.7	5.5	15.7	33.2	47.1
62.5°	2.8	6.0	13.9	23.1	30.9
65°	2.3	6.9	11.5	15.2	16.6
67.5°	1.8	7.4	10.2	9.7	9.7
70°	1.8	6.9	8.8	8.3	8.8
72.5°	1.8	7.4	7.8	7.4	7.8
75°	1.8	6.9	6.9	6.9	6.9
77.5°	1.8	6.5	6.5	6.0	6.0
80°	1.8	5.5	5.5	5.5	5.1
82.5°	1.8	5.1	5.1	5.1	4.2
85°	1.8	4.6	4.6	4.6	3.7
87.5°	1.4	4.2	4.6	4.2	2.8
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	0.00	0.00	0.00	0.00	0.00	11.52	12.78	11.89	13.09	13.41
	3H	0.00	0.72	0.00	1.05	1.42	11.60	12.72	11.99	13.05	13.41
	4H	0.69	1.73	1.10	2.08	2.46	11.68	12.71	12.08	13.07	13.45
	6H	1.67	2.62	2.09	2.99	3.39	11.79	12.73	12.20	13.11	13.50
	8H	2.14	3.04	2.57	3.43	3.84	11.85	12.74	12.28	13.13	13.54
	12H	2.69	3.55	3.12	3.93	4.36	11.93	12.79	12.36	13.17	13.60
4H	2H	0.53	1.56	0.93	1.91	2.30	11.38	12.41	11.78	12.76	13.15
	3H	2.84	3.68	3.25	4.09	4.49	11.55	12.40	11.97	12.80	13.21
	4H	4.20	4.96	4.64	5.38	5.82	11.70	12.46	12.14	12.88	13.32
	6H	5.28	5.93	5.75	6.38	6.85	11.93	12.58	12.39	13.03	13.50
	8H	5.73	6.34	6.20	6.79	7.26	12.06	12.67	12.53	13.11	13.59
	12H	6.22	6.76	6.71	7.24	7.72	12.23	12.77	12.72	13.25	13.73
8H	4H	5.18	5.79	5.65	6.24	6.71	11.70	12.31	12.17	12.76	13.23
	6H	6.69	7.19	7.20	7.69	8.17	12.04	12.54	12.54	13.03	13.52
	8H	7.47	7.92	7.99	8.44	8.93	12.27	12.72	12.80	13.24	13.73
	12H	8.27	8.67	8.78	9.16	9.73	12.61	13.01	13.13	13.50	14.08
12H	4H	5.36	5.89	5.84	6.38	6.85	11.69	12.22	12.17	12.71	13.18
	6H	7.01	7.46	7.53	7.98	8.47	12.06	12.51	12.58	13.02	13.52
	8H	7.97	8.37	8.49	8.86	9.44	12.37	12.77	12.89	13.26	13.84