

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: P1059166

Luminaire Tested: S123RDRP-S340D830-X4F0-XX-UDD-BVL-B

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1059166  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2406-143-30)  
Test Lab: INNOVATION CENTER  
Issue Date: 8/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123RDRP-S340D830-X4F0-XX-UDD-BVL-B  
Description: DEFINE 3 BLACK REGRESSED DIRECT RECESSED HOUSING WITH BLACK STRAIGHT BLADE  
LOUVER WITH DIFFUSER  
CORE LIGHT ENGINE  
Light Source: 3000K CCT, 80 CRI LEDS  
Ballast/Driver: -

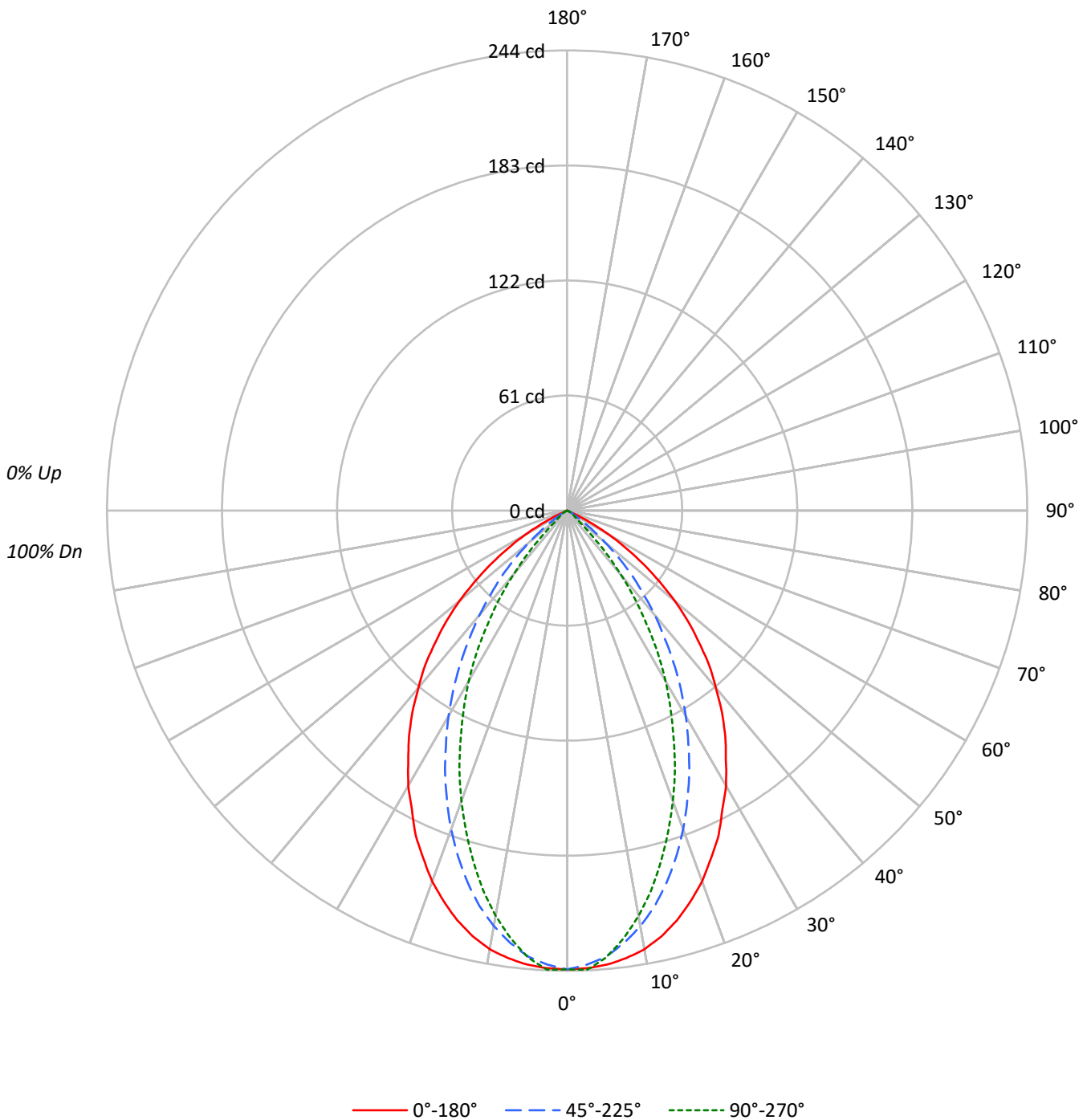
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 277.7 lumens  
Efficiency: N/A  
Efficacy: 22.2 lumens/watt  
Spacing Criteria (0/90/45): 1.06 / 0.81 / 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 (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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	113	110	107	104	110	107	105	103	103	101	100	100	98	97	96	95	94	92
2	106	101	96	92	104	99	95	91	96	92	89	93	90	87	90	87	85	84
3	100	92	87	82	98	91	86	82	88	84	80	86	82	79	83	80	78	76
4	94	85	79	74	92	84	78	74	82	77	73	80	75	72	78	74	71	69
5	88	79	72	67	86	78	71	67	76	70	66	74	69	65	72	68	65	63
6	83	73	66	61	81	72	66	61	70	65	60	69	64	60	67	63	60	58
7	78	68	61	56	77	67	60	56	66	60	56	64	59	55	63	58	55	53
8	74	63	56	52	72	62	56	51	61	55	51	60	55	51	59	54	51	49
9	70	59	52	48	68	58	52	48	57	52	47	56	51	47	55	51	47	46
10	66	55	49	44	65	55	48	44	54	48	44	53	48	44	52	47	44	42

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

	0°	45°	90°
0°	2857	2857	2857
5°	2849	2798	2803
10°	2816	2667	2602
15°	2734	2481	2339
20°	2614	2247	2047
25°	2462	1985	1731
30°	2285	1706	1413
35°	2094	1409	1051
40°	1879	1105	673
45°	1639	807	279
50°	1359	479	108
55°	1003	201	80
60°	608	73	47
65°	164	44	22
70°	0	14	14
75°	0	0	18
80°	0	0	0
85°	0	0	0

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 1639 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	22.4	8.1
10°-20°	57.8	20.8
20°-30°	72.0	25.9
30°-40°	64.4	23.2
40°-50°	40.7	14.6
50°-60°	17.0	6.1
60°-70°	3.2	1.2
70°-80°	0.1	0.0
80°-90°	0.0	0.0
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°	152.2	54.8
0°-40°	216.7	78.0
0°-60°	274.3	98.8
0°-90°	277.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	277.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	243	243	243	243	243	
5°	242	241	237	238	238	23
15°	225	219	204	196	192	63
25°	190	175	153	140	134	87
35°	146	125	98	81	73	91
45°	99	77	49	26	17	76
55°	49	34	10	4	4	44
65°	6	4	2	1	1	8
75°	0	0	0	0	0	0
85°	0	0	0	0	0	0
90°	0	0	0	0	0	0



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	243.3	243.3	243.3	243.3	243.3
2.5°	242.9	243.3	241.0	243.3	243.7
5°	241.7	241.3	237.4	238.2	237.8
7.5°	239.4	238.2	231.2	229.6	228.8
10°	236.2	233.1	223.7	219.8	218.2
12.5°	231.2	226.8	214.7	208.4	206.1
15°	224.9	219.4	204.1	195.5	192.4
17.5°	217.4	209.6	192.4	183.0	178.3
20°	209.2	198.2	179.8	168.5	163.8
22.5°	199.4	187.3	166.5	154.4	149.3
25°	190.0	174.7	153.2	139.9	133.6
27.5°	178.3	162.2	139.1	125.4	118.7
30°	168.5	150.1	125.8	110.5	104.2
32.5°	156.7	137.5	112.1	95.2	89.3
35°	146.1	125.0	98.3	80.7	73.3
37.5°	134.8	112.8	84.6	66.2	59.2
40°	122.6	100.7	72.1	51.7	43.9
42.5°	111.7	88.5	59.6	38.4	30.6
45°	98.7	76.8	48.6	25.9	16.8
47.5°	87.0	65.8	36.8	14.5	9.0
50°	74.4	54.5	26.2	7.4	5.9
52.5°	61.5	43.5	17.2	5.1	4.7
55°	49.0	33.7	9.8	3.9	3.9
57.5°	36.8	24.3	5.1	3.1	2.7
60°	25.9	16.1	3.1	2.4	2.0
62.5°	14.9	9.4	2.4	1.6	1.6
65°	5.9	4.3	1.6	0.8	0.8
67.5°	0.4	1.2	0.8	0.4	0.4
70°	0.0	0.0	0.4	0.4	0.4
72.5°	0.0	0.0	0.4	0.4	0.4
75°	0.0	0.0	0.0	0.0	0.4
77.5°	0.0	0.0	0.0	0.0	0.0
80°	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0
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	8.84	10.02	9.20	10.33	10.64	0.00	0.00	0.00	0.00	0.00
	3H	8.68	9.71	9.06	10.04	10.41	0.00	0.00	0.00	0.00	0.00
	4H	8.59	9.55	9.00	9.90	10.29	0.00	0.00	0.00	0.00	0.00
	6H	8.50	9.37	8.92	9.75	10.14	0.00	0.00	0.00	0.00	0.00
	8H	8.45	9.27	8.88	9.66	10.07	0.00	0.00	0.00	0.00	0.00
	12H	8.40	9.19	8.83	9.57	10.00	0.00	0.00	0.00	0.00	0.00
4H	2H	8.60	9.55	9.00	9.90	10.29	0.00	0.00	0.00	0.00	0.00
	3H	8.43	9.20	8.85	9.61	10.01	0.00	0.00	0.00	0.00	0.00
	4H	8.33	9.01	8.77	9.43	9.88	0.00	0.00	0.00	0.00	0.00
	6H	8.23	8.82	8.70	9.27	9.74	0.00	0.00	0.00	0.00	0.00
	8H	8.17	8.71	8.64	9.16	9.63	0.00	0.00	0.00	0.00	0.00
	12H	8.11	8.59	8.60	9.07	9.55	0.00	0.00	0.00	0.00	0.00
8H	4H	8.17	8.71	8.64	9.16	9.63	0.00	0.00	0.00	0.00	0.00
	6H	8.05	8.49	8.56	8.99	9.48	0.00	0.00	0.00	0.00	0.00
	8H	7.98	8.38	8.51	8.89	9.39	0.00	0.00	0.00	0.00	0.00
	12H	7.92	8.27	8.44	8.77	9.35	0.00	0.00	0.00	0.00	0.00
12H	4H	8.11	8.59	8.60	9.07	9.55	0.00	0.00	0.00	0.00	0.00
	6H	7.98	8.38	8.51	8.89	9.39	0.00	0.00	0.00	0.00	0.00
	8H	7.92	8.27	8.44	8.77	9.35	0.00	0.00	0.00	0.00	0.00