

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: P1059168

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

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1059168  
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-S340D830-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: 3000K CCT, 80 CRI LEDS  
Ballast/Driver: -

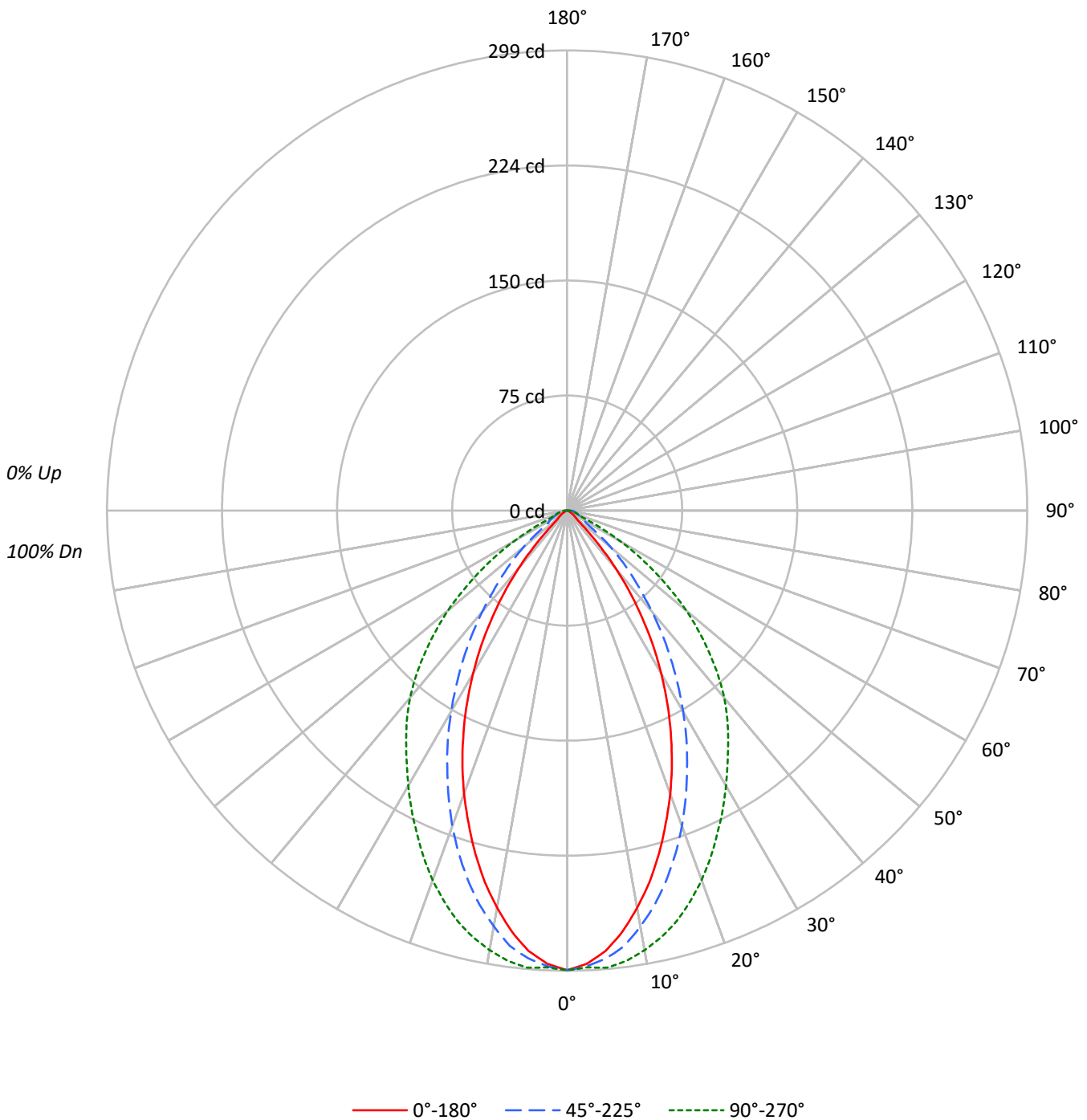
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 358.6 lumens  
Efficiency: N/A  
Efficacy: 28.7 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°	3506	3506	3506
5°	3386	3442	3515
10°	3125	3271	3458
15°	2805	3025	3354
20°	2447	2727	3193
25°	2064	2389	2994
30°	1660	2043	2799
35°	1216	1681	2616
40°	757	1311	2436
45°	287	978	2170
50°	137	674	1849
55°	104	371	1431
60°	73	312	939
65°	56	272	392
70°	55	257	257
75°	73	268	268
80°	108	318	291
85°	216	525	418

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 2170 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	27.4	7.6
10°-20°	70.3	19.6
20°-30°	87.0	24.3
30°-40°	78.0	21.8
40°-50°	51.1	14.3
50°-60°	25.6	7.1
60°-70°	10.0	2.8
70°-80°	5.6	1.6
80°-90°	3.5	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°	184.7	51.5
0°-40°	262.7	73.3
0°-60°	339.5	94.7
0°-90°	358.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	358.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	299	299	299	299	299	
5°	287	292	292	295	298	27
15°	231	240	249	265	276	64
25°	159	169	184	211	231	73
35°	85	96	117	153	182	53
45°	17	28	59	101	131	16
55°	5	6	18	49	70	5
65°	2	6	10	13	14	2
75°	2	6	6	6	6	2
85°	2	4	4	4	3	1
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	298.6	298.6	298.6	298.6	298.6
2.5°	294.7	299.0	296.3	296.7	297.1
5°	287.3	292.0	292.0	295.1	298.2
7.5°	275.9	281.4	285.3	290.8	295.1
10°	262.1	268.8	274.3	284.1	290.0
12.5°	247.2	255.5	262.5	275.5	283.7
15°	230.7	240.2	248.8	265.3	275.9
17.5°	213.1	222.5	233.9	253.1	266.1
20°	195.8	205.2	218.2	239.8	255.5
22.5°	177.8	187.6	201.3	225.3	243.7
25°	159.3	169.1	184.4	210.7	231.1
27.5°	140.9	150.7	168.0	196.6	219.0
30°	122.4	132.2	150.7	181.3	206.4
32.5°	104.0	114.6	133.8	167.2	193.9
35°	84.8	96.1	117.3	152.7	182.5
37.5°	67.1	77.7	101.6	140.1	171.1
40°	49.4	60.8	85.5	127.9	158.9
42.5°	32.2	44.3	71.0	114.6	145.2
45°	17.3	27.9	58.9	100.9	130.7
47.5°	9.4	15.3	47.5	86.3	115.8
50°	7.5	8.6	36.9	73.8	101.2
52.5°	6.3	7.1	26.3	62.0	85.2
55°	5.1	6.3	18.1	49.4	69.9
57.5°	4.3	5.5	14.1	38.5	54.5
60°	3.1	4.7	13.3	28.3	40.0
62.5°	2.4	5.1	11.8	19.6	26.3
65°	2.0	5.9	9.8	13.0	14.1
67.5°	1.6	6.3	8.6	8.2	8.2
70°	1.6	5.9	7.5	7.1	7.5
72.5°	1.6	6.3	6.7	6.3	6.7
75°	1.6	5.9	5.9	5.9	5.9
77.5°	1.6	5.5	5.5	5.1	5.1
80°	1.6	4.7	4.7	4.7	4.3
82.5°	1.6	4.3	4.3	4.3	3.5
85°	1.6	3.9	3.9	3.9	3.1
87.5°	1.2	3.5	3.9	3.5	2.4
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	10.97	12.22	11.33	12.54	12.85
	3H	0.00	0.18	0.00	0.51	0.88	11.05	12.16	11.43	12.49	12.86
	4H	0.18	1.22	0.59	1.57	1.95	11.13	12.16	11.53	12.51	12.90
	6H	1.18	2.13	1.60	2.50	2.90	11.23	12.18	11.64	12.55	12.94
	8H	1.67	2.57	2.10	2.96	3.36	11.29	12.18	11.72	12.58	12.98
	12H	2.23	3.09	2.67	3.47	3.90	11.36	12.22	11.80	12.61	13.04
4H	2H	0.00	1.00	0.37	1.35	1.73	10.82	11.86	11.23	12.21	12.59
	3H	2.30	3.14	2.71	3.55	3.95	11.00	11.84	11.41	12.25	12.65
	4H	3.67	4.43	4.11	4.85	5.29	11.15	11.91	11.59	12.33	12.77
	6H	4.76	5.41	5.23	5.86	6.33	11.37	12.03	11.84	12.47	12.94
	8H	5.22	5.83	5.69	6.28	6.75	11.50	12.11	11.97	12.55	13.03
	12H	5.72	6.26	6.21	6.74	7.21	11.67	12.20	12.15	12.69	13.16
8H	4H	4.65	5.26	5.12	5.70	6.18	11.15	11.76	11.62	12.21	12.68
	6H	6.16	6.66	6.67	7.16	7.64	11.48	11.98	11.99	12.48	12.96
	8H	6.93	7.38	7.46	7.90	8.39	11.71	12.16	12.24	12.68	13.17
	12H	7.74	8.13	8.25	8.63	9.20	12.04	12.44	12.56	12.93	13.51
12H	4H	4.82	5.36	5.31	5.84	6.32	11.13	11.67	11.62	12.15	12.63
	6H	6.47	6.92	7.00	7.44	7.93	11.50	11.95	12.03	12.47	12.96
	8H	7.43	7.82	7.94	8.32	8.89	11.81	12.21	12.32	12.70	13.27