

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: P1059581

Luminaire Tested: S123RDR-H340D835-X4F0-XX-UDD-BVL-S

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1059581  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-69)  
Test Lab: INNOVATION CENTER  
Issue Date: 8/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123RDR-H340D835-X4F0-XX-UDD-BVL-S  
Description: DEFINE 3 SILVER REGRESSED DIRECT RECESSED HOUSING WITH BLACK STRAIGHT BLADE  
LOUVER WITH DIFFUSER  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 3500K CCT, 80 CRI LEDS  
Ballast/Driver: -

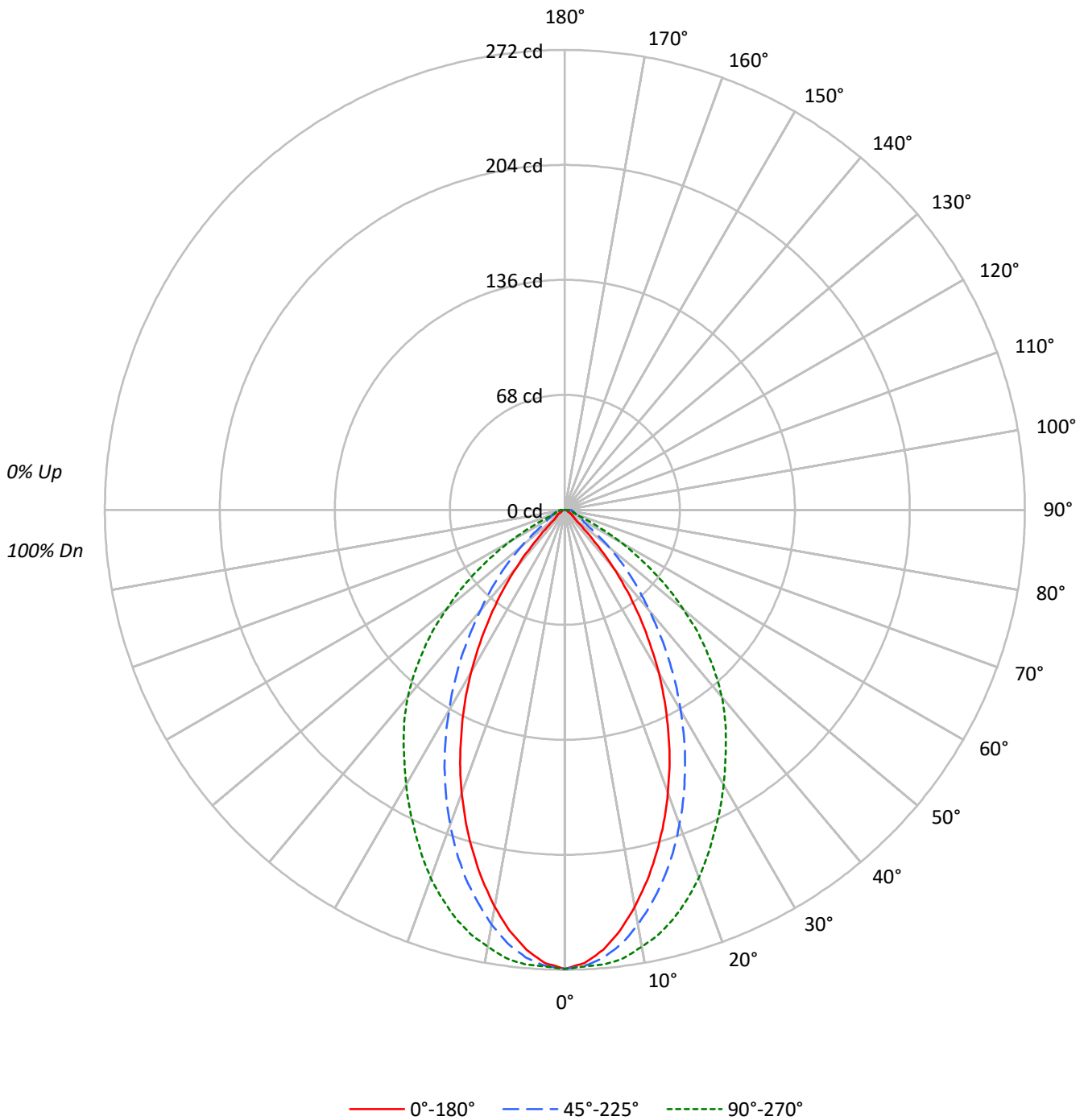
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 326.2 lumens  
Efficiency: N/A  
Efficacy: 27.9 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): 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	
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	89	102	97	92	88	94	90	86	90	87	85	88	85	83	81
3	98	90	84	79	96	89	83	78	86	81	77	83	79	76	81	78	75	73
4	92	83	76	71	90	81	75	70	79	74	69	77	72	69	75	71	68	66
5	86	76	69	64	84	75	68	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	64	58	53	63	57	53	62	56	52	61	56	52	50
8	72	61	54	49	70	60	53	49	59	53	48	58	52	48	57	52	48	46
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	41	40

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

	0°	45°	90°
0°	3188	3188	3188
5°	3079	3132	3181
10°	2841	2970	3129
15°	2549	2746	3039
20°	2226	2475	2895
25°	1872	2179	2717
30°	1504	1858	2545
35°	1101	1530	2381
40°	681	1190	2215
45°	262	897	1973
50°	130	614	1668
55°	102	340	1308
60°	68	282	878
65°	58	253	392
70°	58	227	227
75°	77	245	227
80°	115	311	250
85°	162	498	337

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 1973 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	24.9	7.6
10°-20°	63.7	19.5
20°-30°	79.1	24.3
30°-40°	70.9	21.7
40°-50°	46.6	14.3
50°-60°	23.3	7.2
60°-70°	9.2	2.8
70°-80°	5.2	1.6
80°-90°	3.2	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°	167.7	51.4
0°-40°	238.6	73.2
0°-60°	308.5	94.6
0°-90°	326.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	326.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	272	272	272	272	272	
5°	261	265	266	267	270	24
15°	210	216	226	241	250	58
25°	144	154	168	192	210	66
35°	77	87	107	140	166	48
45°	16	26	54	91	119	15
55°	5	6	17	45	64	4
65°	2	6	9	12	14	2
75°	2	5	5	5	5	2
85°	1	4	4	4	2	1
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	271.5	271.5	271.5	271.5	271.5
2.5°	268.2	272.0	269.9	269.9	270.3
5°	261.2	265.3	265.7	267.4	269.9
7.5°	250.8	256.2	258.7	263.7	267.4
10°	238.3	244.1	249.1	257.8	262.4
12.5°	224.6	230.4	237.9	250.0	257.0
15°	209.7	216.3	225.9	241.2	250.0
17.5°	194.3	201.0	212.6	230.0	241.2
20°	178.1	185.6	198.1	218.0	231.7
22.5°	161.9	170.2	183.5	205.1	220.9
25°	144.5	153.6	168.2	191.8	209.7
27.5°	127.9	137.4	152.8	178.5	198.9
30°	110.9	120.4	137.0	164.8	187.7
32.5°	93.4	104.2	121.7	152.0	176.5
35°	76.8	87.2	106.7	139.5	166.1
37.5°	60.6	71.0	91.3	127.5	155.7
40°	44.4	55.2	77.6	115.8	144.5
42.5°	29.1	40.3	65.6	104.2	132.0
45°	15.8	26.2	54.0	90.9	118.8
47.5°	8.7	14.1	43.6	78.5	105.9
50°	7.1	7.9	33.6	66.8	91.3
52.5°	5.8	6.6	24.1	55.6	78.1
55°	5.0	5.8	16.6	44.8	63.9
57.5°	4.2	5.0	13.3	34.5	50.2
60°	2.9	5.0	12.0	25.3	37.4
62.5°	2.5	5.0	10.4	17.4	24.9
65°	2.1	5.8	9.1	11.6	14.1
67.5°	1.7	5.8	7.9	7.5	7.5
70°	1.7	5.8	6.6	6.2	6.6
72.5°	1.7	6.2	6.2	5.8	5.8
75°	1.7	5.4	5.4	5.0	5.0
77.5°	1.7	5.0	5.0	4.6	4.6
80°	1.7	4.6	4.6	4.2	3.7
82.5°	1.7	4.2	4.2	3.7	3.3
85°	1.2	3.7	3.7	3.7	2.5
87.5°	1.2	3.3	3.7	3.3	2.1
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	10.58	11.84	10.94	12.15	12.46
	3H	0.00	0.15	0.00	0.48	0.85	10.66	11.77	11.04	12.10	12.47
	4H	0.21	1.25	0.62	1.60	1.98	10.72	11.76	11.13	12.11	12.49
	6H	1.28	2.23	1.70	2.60	3.00	10.82	11.77	11.24	12.14	12.54
	8H	1.83	2.73	2.26	3.12	3.53	10.88	11.78	11.31	12.17	12.58
	12H	2.30	3.16	2.73	3.54	3.97	10.95	11.81	11.38	12.19	12.62
4H	2H	0.00	0.78	0.15	1.13	1.52	10.44	11.47	10.84	11.83	12.21
	3H	2.20	3.05	2.62	3.46	3.86	10.61	11.46	11.02	11.86	12.27
	4H	3.56	4.32	3.99	4.74	5.18	10.74	11.50	11.18	11.92	12.36
	6H	4.71	5.36	5.17	5.81	6.28	10.96	11.61	11.42	12.06	12.53
	8H	5.23	5.84	5.70	6.29	6.76	11.08	11.69	11.55	12.14	12.61
	12H	5.68	6.22	6.16	6.70	7.18	11.24	11.78	11.73	12.26	12.74
8H	4H	4.48	5.09	4.95	5.54	6.01	10.74	11.35	11.21	11.80	12.27
	6H	6.10	6.60	6.60	7.10	7.58	11.08	11.58	11.58	12.08	12.56
	8H	6.94	7.39	7.46	7.90	8.40	11.30	11.75	11.83	12.27	12.76
	12H	7.70	8.10	8.22	8.59	9.17	11.62	12.02	12.14	12.52	13.09
12H	4H	4.65	5.19	5.14	5.67	6.15	10.73	11.27	11.22	11.76	12.23
	6H	6.42	6.87	6.94	7.38	7.88	11.11	11.56	11.63	12.08	12.57
	8H	7.44	7.84	7.95	8.33	8.90	11.42	11.81	11.93	12.31	12.88