

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: P1059257

Luminaire Tested: S123RDRP-S560D835-X4F0-XX-UDD-BVL-S

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1059257  
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: S123RDRP-S560D835-X4F0-XX-UDD-BVL-S  
Description: DEFINE 3 SILVER REGRESSED DIRECT RECESSED HOUSING WITH BLACK STRAIGHT BLADE  
LOUVER WITH DIFFUSER  
CORE LIGHT ENGINE  
Light Source: 3500K CCT, 80 CRI LEDS  
Ballast/Driver: -

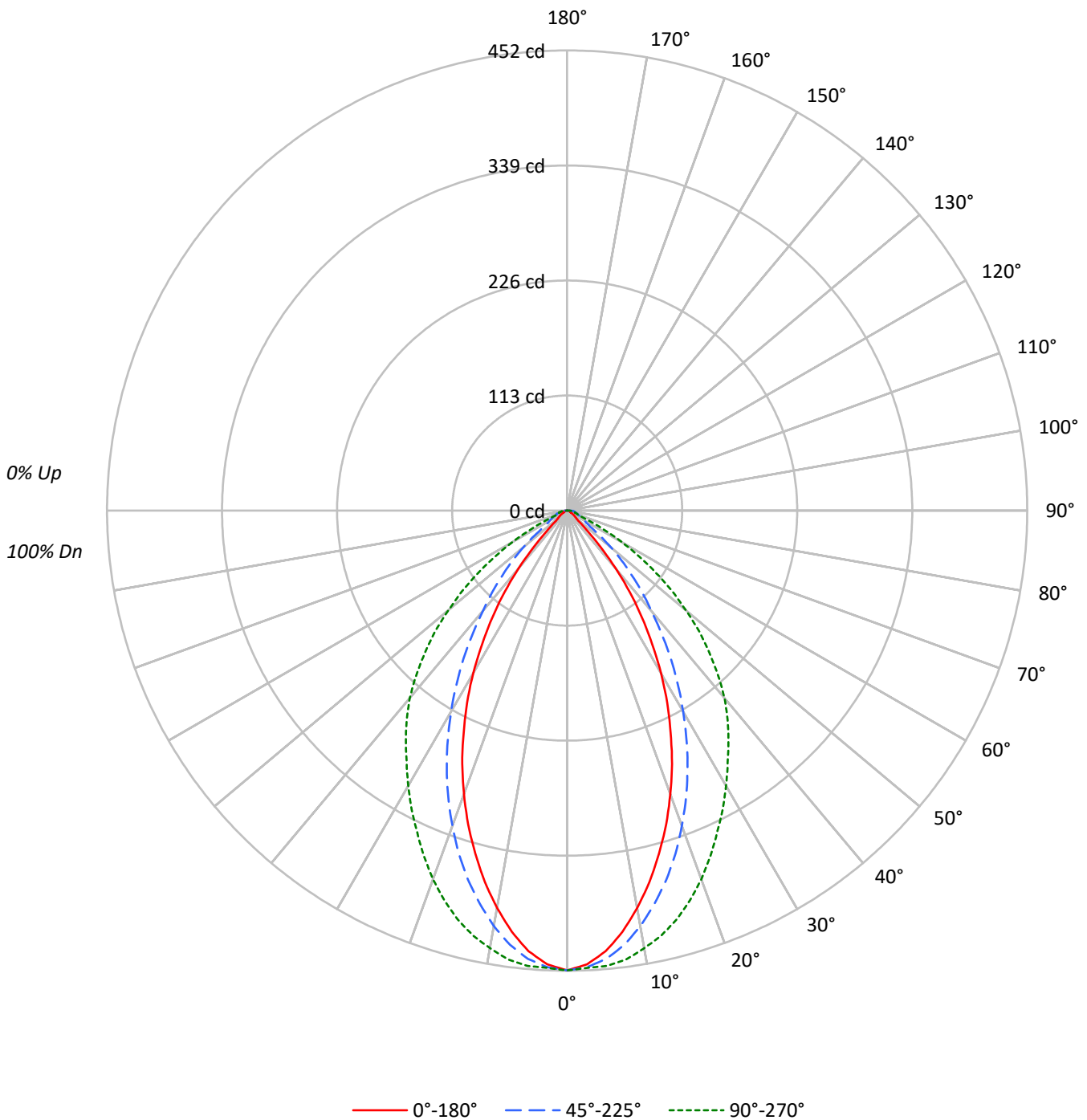
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 542.5 lumens  
Efficiency: N/A  
Efficacy: 27.7 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): 19.6  
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	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°	5303	5303	5303
5°	5120	5210	5291
10°	4727	4940	5203
15°	4239	4567	5054
20°	3703	4116	4815
25°	3113	3624	4518
30°	2500	3090	4232
35°	1832	2544	3959
40°	1133	1979	3683
45°	435	1491	3280
50°	214	1021	2775
55°	170	565	2176
60°	113	470	1461
65°	97	422	653
70°	96	378	378
75°	127	408	377
80°	189	514	419
85°	283	835	552

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 3280 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	41.4	7.6
10°-20°	106.0	19.5
20°-30°	131.6	24.3
30°-40°	117.9	21.7
40°-50°	77.5	14.3
50°-60°	38.8	7.2
60°-70°	15.3	2.8
70°-80°	8.6	1.6
80°-90°	5.4	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°	279.0	51.4
0°-40°	396.9	73.2
0°-60°	513.2	94.6
0°-90°	542.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	542.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	452	452	452	452	452	
5°	434	441	442	445	449	40
15°	349	360	376	401	416	97
25°	240	256	280	319	349	110
35°	128	145	178	232	276	79
45°	26	44	90	151	198	25
55°	8	10	28	75	106	7
65°	4	10	15	19	24	4
75°	3	9	9	8	8	3
85°	2	6	6	6	4	2
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	451.6	451.6	451.6	451.6	451.6
2.5°	446.1	452.3	448.9	448.9	449.6
5°	434.4	441.3	442.0	444.7	448.9
7.5°	417.1	426.1	430.2	438.5	444.7
10°	396.4	406.1	414.3	428.8	436.4
12.5°	373.6	383.3	395.7	415.7	427.5
15°	348.7	359.8	375.7	401.2	415.7
17.5°	323.2	334.2	353.6	382.6	401.2
20°	296.3	308.7	329.4	362.6	385.3
22.5°	269.3	283.1	305.2	341.1	367.4
25°	240.3	255.5	279.7	319.0	348.7
27.5°	212.7	228.6	254.1	296.9	330.8
30°	184.4	200.3	227.9	274.2	312.1
32.5°	155.4	173.3	202.3	252.7	293.5
35°	127.8	145.0	177.5	232.0	276.2
37.5°	100.8	118.1	151.9	212.0	259.0
40°	73.9	91.8	129.1	192.7	240.3
42.5°	48.3	67.0	109.1	173.3	219.6
45°	26.2	43.5	89.8	151.2	197.5
47.5°	14.5	23.5	72.5	130.5	176.1
50°	11.7	13.1	55.9	111.2	151.9
52.5°	9.7	11.0	40.1	92.5	129.8
55°	8.3	9.7	27.6	74.6	106.3
57.5°	6.9	8.3	22.1	57.3	83.6
60°	4.8	8.3	20.0	42.1	62.2
62.5°	4.1	8.3	17.3	29.0	41.4
65°	3.5	9.7	15.2	19.3	23.5
67.5°	2.8	9.7	13.1	12.4	12.4
70°	2.8	9.7	11.0	10.4	11.0
72.5°	2.8	10.4	10.4	9.7	9.7
75°	2.8	9.0	9.0	8.3	8.3
77.5°	2.8	8.3	8.3	7.6	7.6
80°	2.8	7.6	7.6	6.9	6.2
82.5°	2.8	6.9	6.9	6.2	5.5
85°	2.1	6.2	6.2	6.2	4.1
87.5°	2.1	5.5	6.2	5.5	3.5
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	0.15	12.34	13.60	12.71	13.91	14.23
	3H	0.80	1.92	1.18	2.25	2.61	12.42	13.53	12.80	13.86	14.23
	4H	1.98	3.01	2.38	3.36	3.75	12.48	13.52	12.89	13.87	14.26
	6H	3.03	3.98	3.45	4.35	4.75	12.58	13.53	13.00	13.90	14.30
	8H	3.58	4.48	4.01	4.87	5.27	12.64	13.54	13.07	13.93	14.34
	12H	4.06	4.92	4.49	5.30	5.73	12.71	13.57	13.14	13.95	14.38
4H	2H	1.52	2.56	1.93	2.91	3.29	12.20	13.24	12.61	13.59	13.97
	3H	3.99	4.84	4.41	5.24	5.65	12.38	13.22	12.79	13.63	14.03
	4H	5.34	6.10	5.78	6.52	6.96	12.50	13.26	12.94	13.68	14.13
	6H	6.48	7.13	6.94	7.58	8.05	12.72	13.37	13.18	13.82	14.29
	8H	6.99	7.60	7.46	8.05	8.52	12.84	13.45	13.31	13.90	14.37
	12H	7.45	7.99	7.93	8.47	8.94	13.00	13.54	13.49	14.02	14.50
8H	4H	6.26	6.87	6.73	7.32	7.79	12.51	13.12	12.98	13.57	14.04
	6H	7.86	8.36	8.36	8.85	9.34	12.84	13.34	13.34	13.84	14.32
	8H	8.68	9.13	9.20	9.65	10.14	13.06	13.52	13.59	14.03	14.52
	12H	9.46	9.86	9.98	10.35	10.93	13.39	13.79	13.90	14.28	14.85
12H	4H	6.42	6.96	6.91	7.45	7.92	12.50	13.04	12.98	13.52	14.00
	6H	8.17	8.62	8.69	9.14	9.63	12.87	13.32	13.39	13.84	14.33
	8H	9.18	9.57	9.69	10.07	10.64	13.18	13.58	13.69	14.07	14.64