

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: P1059302

Luminaire Tested: S123RDRP-S560D935-X4F0-XX-UDD-BVL-S

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1059302  
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-S560D935-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, 90 CRI LEDS  
Ballast/Driver: -

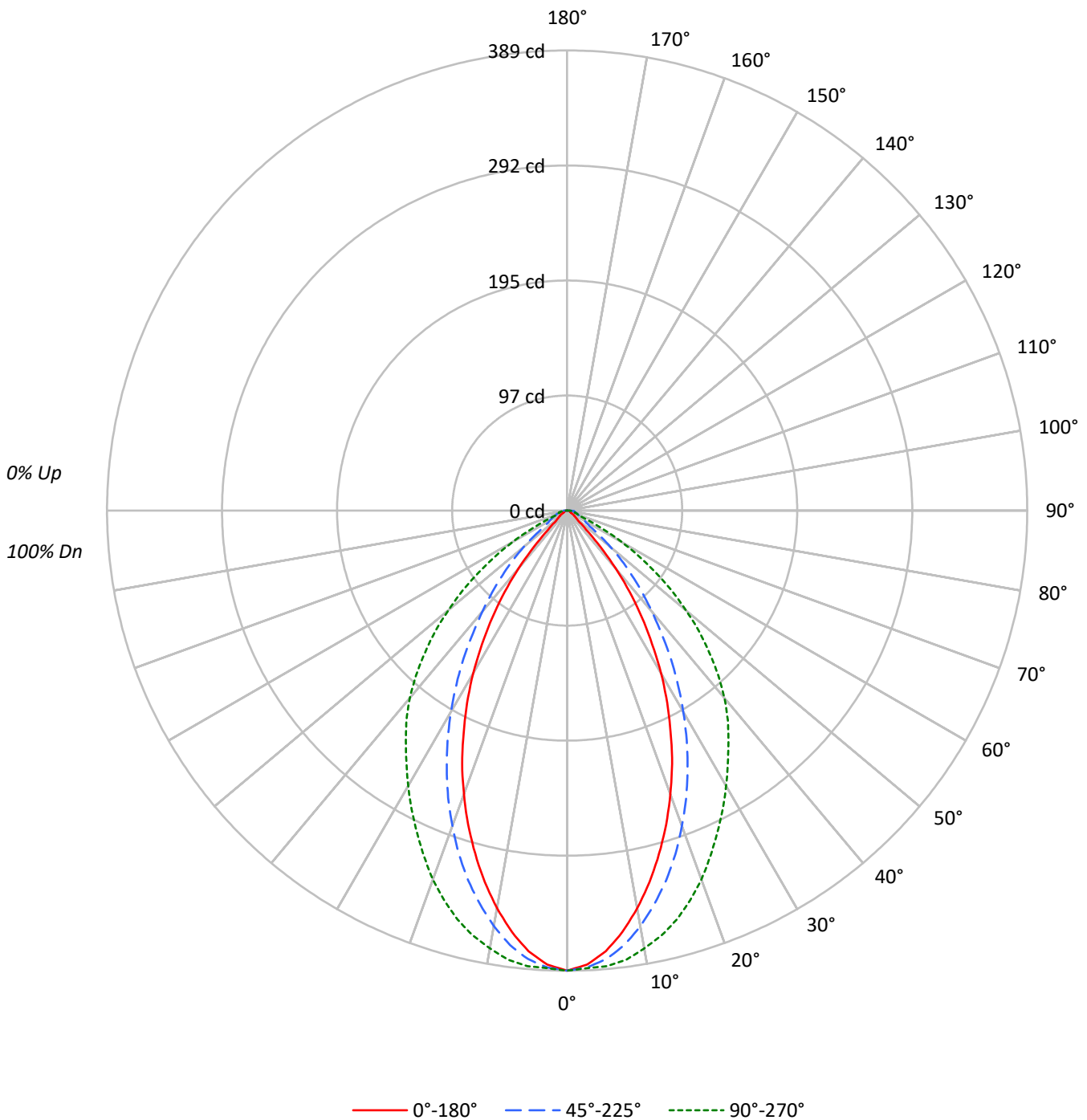
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 467.1 lumens  
Efficiency: N/A  
Efficacy: 23.8 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°	4567	4567	4567
5°	4408	4485	4556
10°	4070	4253	4481
15°	3651	3933	4351
20°	3188	3544	4146
25°	2681	3120	3891
30°	2153	2660	3645
35°	1577	2190	3409
40°	975	1705	3171
45°	375	1284	2825
50°	185	881	2389
55°	145	487	1875
60°	99	404	1256
65°	83	364	561
70°	82	326	326
75°	109	349	322
80°	162	440	365
85°	243	728	485

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 2825 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	35.7	7.6
10°-20°	91.3	19.5
20°-30°	113.3	24.3
30°-40°	101.5	21.7
40°-50°	66.7	14.3
50°-60°	33.4	7.2
60°-70°	13.2	2.8
70°-80°	7.4	1.6
80°-90°	4.7	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°	240.2	51.4
0°-40°	341.7	73.2
0°-60°	441.9	94.6
0°-90°	467.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	467.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	389	389	389	389	389	
5°	374	380	380	383	386	35
15°	300	310	324	346	358	84
25°	207	220	241	275	300	95
35°	110	125	153	200	238	68
45°	23	38	77	130	170	21
55°	7	8	24	64	92	6
65°	3	8	13	17	20	3
75°	2	8	8	7	7	3
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°	388.9	388.9	388.9	388.9	388.9
2.5°	384.1	389.5	386.5	386.5	387.1
5°	374.0	379.9	380.5	382.9	386.5
7.5°	359.1	366.9	370.4	377.6	382.9
10°	341.3	349.6	356.7	369.2	375.8
12.5°	321.7	330.0	340.7	357.9	368.0
15°	300.3	309.8	323.5	345.5	357.9
17.5°	278.3	287.8	304.4	329.4	345.5
20°	255.1	265.8	283.6	312.2	331.8
22.5°	231.9	243.8	262.8	293.7	316.3
25°	206.9	220.0	240.8	274.7	300.3
27.5°	183.1	196.8	218.8	255.7	284.8
30°	158.8	172.4	196.2	236.0	268.8
32.5°	133.8	149.2	174.2	217.6	252.7
35°	110.0	124.9	152.8	199.8	237.8
37.5°	86.8	101.7	130.8	182.5	223.0
40°	63.6	79.1	111.2	165.9	206.9
42.5°	41.6	57.7	93.9	149.2	189.1
45°	22.6	37.5	77.3	130.2	170.1
47.5°	12.5	20.2	62.4	112.4	151.6
50°	10.1	11.3	48.2	95.7	130.8
52.5°	8.3	9.5	34.5	79.7	111.8
55°	7.1	8.3	23.8	64.2	91.6
57.5°	5.9	7.1	19.0	49.4	71.9
60°	4.2	7.1	17.2	36.3	53.5
62.5°	3.6	7.1	14.9	25.0	35.7
65°	3.0	8.3	13.1	16.6	20.2
67.5°	2.4	8.3	11.3	10.7	10.7
70°	2.4	8.3	9.5	8.9	9.5
72.5°	2.4	8.9	8.9	8.3	8.3
75°	2.4	7.7	7.7	7.1	7.1
77.5°	2.4	7.1	7.1	6.5	6.5
80°	2.4	6.5	6.5	5.9	5.4
82.5°	2.4	5.9	5.9	5.4	4.8
85°	1.8	5.4	5.4	5.4	3.6
87.5°	1.8	4.8	5.4	4.8	3.0
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	0.00	0.00	0.00	0.00	0.00	11.83	13.08	12.19	13.40	13.71
	3H	0.24	1.35	0.62	1.68	2.05	11.91	13.02	12.29	13.35	13.71
	4H	1.41	2.45	1.82	2.80	3.19	11.97	13.00	12.37	13.35	13.74
	6H	2.47	3.42	2.89	3.79	4.19	12.06	13.02	12.48	13.39	13.78
	8H	3.02	3.92	3.45	4.31	4.71	12.13	13.03	12.56	13.42	13.82
	12H	3.50	4.36	3.94	4.75	5.18	12.20	13.06	12.63	13.44	13.87
4H	2H	0.99	2.02	1.39	2.38	2.76	11.69	12.72	12.09	13.07	13.46
	3H	3.45	4.30	3.86	4.70	5.10	11.86	12.71	12.27	13.11	13.52
	4H	4.79	5.55	5.23	5.97	6.41	11.99	12.74	12.42	13.16	13.61
	6H	5.92	6.58	6.39	7.02	7.49	12.20	12.85	12.66	13.30	13.77
	8H	6.43	7.04	6.90	7.49	7.96	12.33	12.94	12.80	13.39	13.86
	12H	6.90	7.44	7.38	7.92	8.39	12.49	13.03	12.98	13.51	13.99
8H	4H	5.70	6.31	6.17	6.76	7.23	11.99	12.60	12.46	13.05	13.52
	6H	7.30	7.80	7.80	8.30	8.78	12.31	12.82	12.82	13.31	13.79
	8H	8.12	8.57	8.65	9.09	9.58	12.55	13.00	13.07	13.51	14.01
	12H	8.91	9.31	9.43	9.81	10.38	12.88	13.28	13.39	13.77	14.35
12H	4H	5.87	6.41	6.36	6.89	7.37	11.98	12.52	12.46	13.00	13.47
	6H	7.61	8.06	8.13	8.58	9.07	12.34	12.80	12.87	13.31	13.80
	8H	8.62	9.02	9.14	9.51	10.09	12.66	13.06	13.17	13.55	14.13