

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: P1059706

Luminaire Tested: S123RDR-H560D935-X4F0-XX-UDD-BVL-B

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1059706  
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: S123RDR-H560D935-X4F0-XX-UDD-BVL-B  
Description: DEFINE 3 BLACK REGRESSED DIRECT RECESSED HOUSING WITH BLACK STRAIGHT BLADE LOUVER WITH DIFFUSER  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 3500K CCT, 90 CRI LEDS  
Ballast/Driver: -

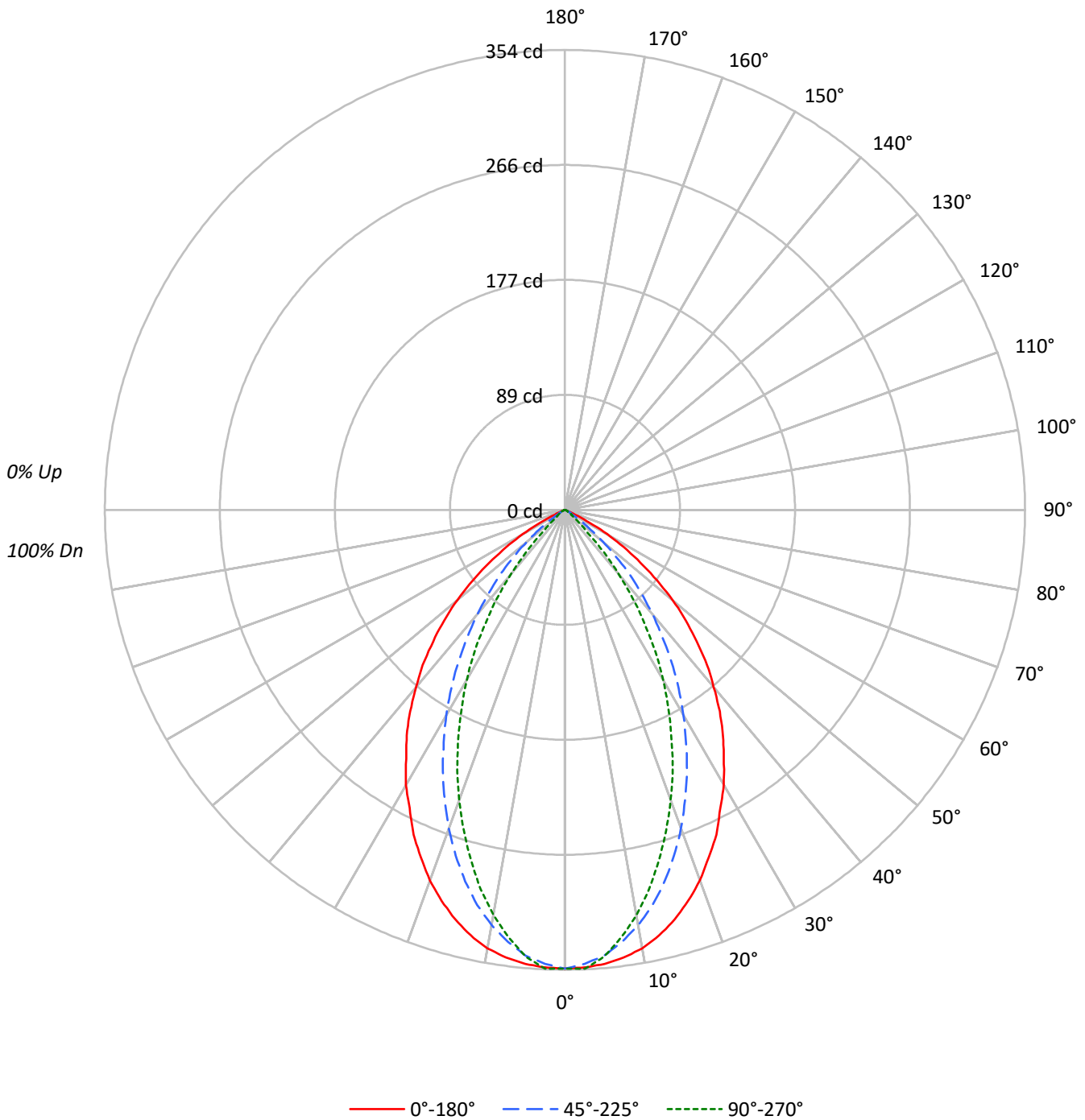
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 402.9 lumens  
Efficiency: N/A  
Efficacy: 23.2 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): 17.4  
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

TEST NUMBER: P1059706

CATALOG NUMBER: S123RDR-H560D935-X4F0-XX-UDD-BVL-B

### Luminous Intensity Polar Plot





TEST NUMBER: P1059706

CATALOG NUMBER: S123RDR-H560D935-X4F0-XX-UDD-BVL-B

**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°	4146	4146	4146
5°	4135	4061	4068
10°	4087	3870	3776
15°	3967	3601	3394
20°	3794	3261	2970
25°	3572	2880	2512
30°	3315	2475	2050
35°	3040	2046	1524
40°	2729	1603	976
45°	2380	1171	405
50°	1973	696	155
55°	1456	291	117
60°	881	106	66
65°	236	64	31
70°	0	21	21
75°	0	0	27
80°	0	0	0
85°	0	0	0

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 2380 cd/sqm



TEST NUMBER: P1059706

CATALOG NUMBER: S123RDR-H560D935-X4F0-XX-UDD-BVL-B

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	32.5	8.1
10°-20°	83.9	20.8
20°-30°	104.5	25.9
30°-40°	93.5	23.2
40°-50°	59.0	14.6
50°-60°	24.7	6.1
60°-70°	4.6	1.2
70°-80°	0.2	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°	220.9	54.8
0°-40°	314.4	78.0
0°-60°	398.1	98.8
0°-90°	402.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	402.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	353	353	353	353	353	
5°	351	350	344	346	345	33
15°	326	318	296	284	279	92
25°	276	254	222	203	194	126
35°	212	181	143	117	106	132
45°	143	111	70	38	24	110
55°	71	49	14	6	6	64
65°	8	6	2	1	1	12
75°	0	0	0	0	1	0
85°	0	0	0	0	0	0
90°	0	0	0	0	0	



TEST NUMBER: P1059706

CATALOG NUMBER: S123RDR-H560D935-X4F0-XX-UDD-BVL-B

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	353.1	353.1	353.1	353.1	353.1
2.5°	352.5	353.1	349.7	353.1	353.6
5°	350.8	350.2	344.5	345.7	345.1
7.5°	347.4	345.7	335.4	333.2	332.0
10°	342.8	338.3	324.6	319.0	316.7
12.5°	335.4	329.2	311.6	302.5	299.1
15°	326.3	318.4	296.2	283.7	279.2
17.5°	315.5	304.2	279.2	265.5	258.7
20°	303.6	287.7	261.0	244.5	237.7
22.5°	289.4	271.8	241.6	224.0	216.6
25°	275.7	253.6	222.3	203.0	193.9
27.5°	258.7	235.4	201.8	181.9	172.3
30°	244.5	217.8	182.5	160.3	151.2
32.5°	227.4	199.6	162.6	138.2	129.6
35°	212.1	181.4	142.7	117.1	106.3
37.5°	195.6	163.7	122.8	96.1	85.9
40°	178.0	146.1	104.6	75.0	63.7
42.5°	162.0	128.5	86.4	55.7	44.3
45°	143.3	111.4	70.5	37.5	24.4
47.5°	126.2	95.5	53.4	21.0	13.1
50°	108.0	79.0	38.1	10.8	8.5
52.5°	89.3	63.1	25.0	7.4	6.8
55°	71.1	48.9	14.2	5.7	5.7
57.5°	53.4	35.3	7.4	4.5	4.0
60°	37.5	23.3	4.5	3.4	2.8
62.5°	21.6	13.6	3.4	2.3	2.3
65°	8.5	6.3	2.3	1.1	1.1
67.5°	0.6	1.7	1.1	0.6	0.6
70°	0.0	0.0	0.6	0.6	0.6
72.5°	0.0	0.0	0.6	0.6	0.6
75°	0.0	0.0	0.0	0.0	0.6
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

TEST NUMBER: P1059706  
 CATALOG NUMBER: S123RDR-H560D935-X4F0-XX-UDD-BVL-B

**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	10.14	11.31	10.50	11.63	11.94	0.00	0.00	0.00	0.00	0.00
	3H	9.98	11.01	10.36	11.34	11.71	0.00	0.00	0.00	0.00	0.00
	4H	9.89	10.85	10.30	11.20	11.58	0.00	0.00	0.00	0.00	0.00
	6H	9.80	10.67	10.22	11.04	11.44	0.00	0.00	0.00	0.00	0.00
	8H	9.75	10.57	10.18	10.96	11.37	0.00	0.00	0.00	0.00	0.00
	12H	9.70	10.48	10.13	10.87	11.30	0.00	0.00	0.00	0.00	0.00
4H	2H	9.90	10.85	10.30	11.20	11.59	0.00	0.00	0.00	0.00	0.00
	3H	9.73	10.50	10.15	10.91	11.31	0.00	0.00	0.00	0.00	0.00
	4H	9.63	10.31	10.06	10.73	11.18	0.00	0.00	0.00	0.00	0.00
	6H	9.53	10.11	10.00	10.56	11.03	0.00	0.00	0.00	0.00	0.00
	8H	9.46	10.01	9.94	10.46	10.93	0.00	0.00	0.00	0.00	0.00
	12H	9.41	9.88	9.90	10.37	10.85	0.00	0.00	0.00	0.00	0.00
8H	4H	9.47	10.01	9.94	10.46	10.93	0.00	0.00	0.00	0.00	0.00
	6H	9.35	9.79	9.85	10.29	10.77	0.00	0.00	0.00	0.00	0.00
	8H	9.28	9.67	9.80	10.19	10.69	0.00	0.00	0.00	0.00	0.00
	12H	9.22	9.57	9.74	10.07	10.65	0.00	0.00	0.00	0.00	0.00
12H	4H	9.41	9.88	9.90	10.37	10.85	0.00	0.00	0.00	0.00	0.00
	6H	9.28	9.67	9.80	10.19	10.69	0.00	0.00	0.00	0.00	0.00
	8H	9.22	9.57	9.74	10.07	10.65	0.00	0.00	0.00	0.00	0.00