

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: P1059314

Luminaire Tested: S123RDRP-S560D940-X4F0-XX-UDD-SVL-S

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1059314  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-68)  
Test Lab: INNOVATION CENTER  
Issue Date: 8/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123RDRP-S560D940-X4F0-XX-UDD-SVL-S  
Description: DEFINE 3 SILVER REGRESSED DIRECT RECESSED HOUSING WITH SILVER STRAIGHT BLADE  
LOUVER WITH DIFFUSER  
CORE LIGHT ENGINE  
Light Source: 4000K CCT, 90 CRI LEDS  
Ballast/Driver: -

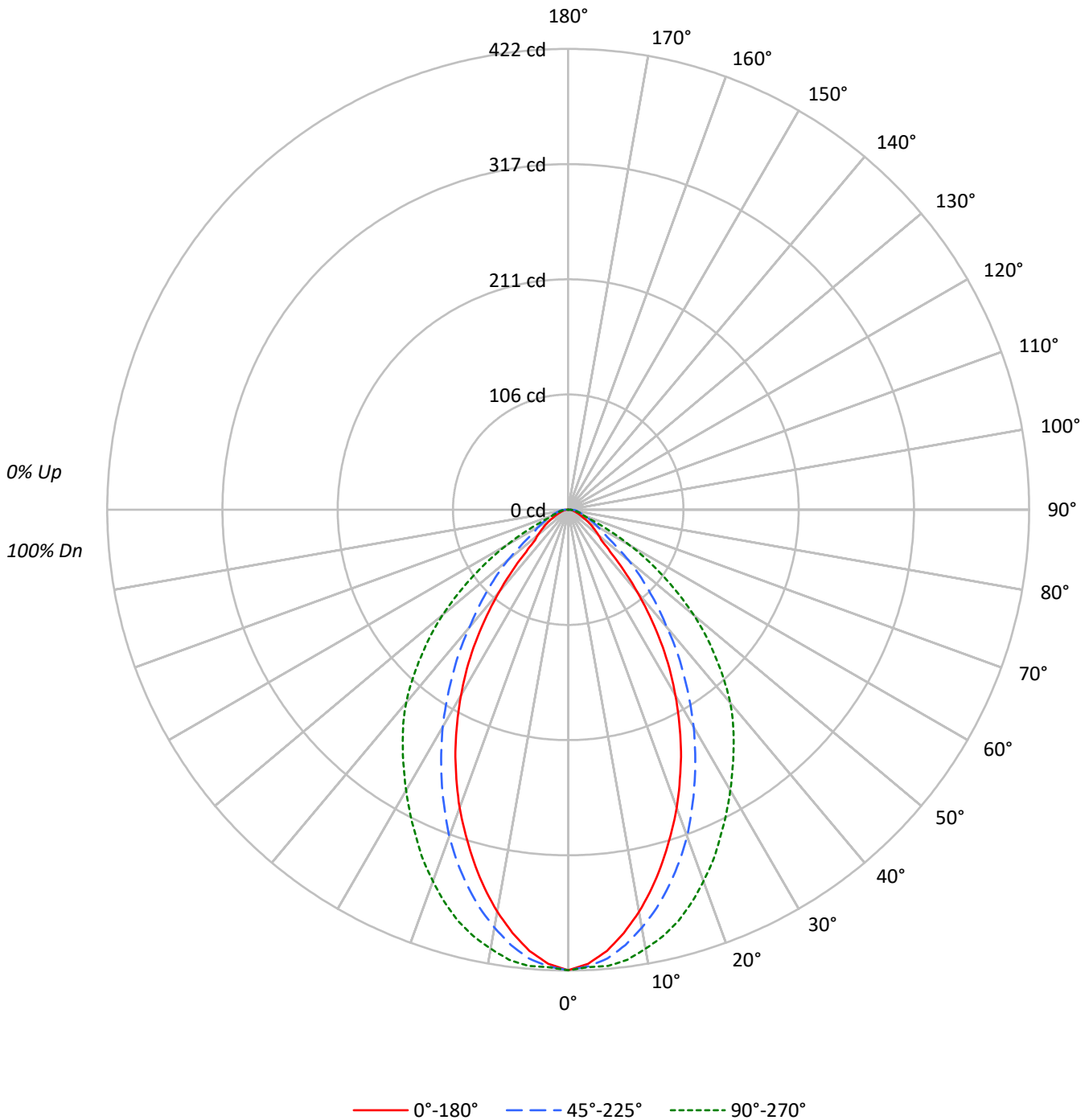
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 564.8 lumens  
Efficiency: N/A  
Efficacy: 28.8 lumens/watt  
Spacing Criteria (0/90/45): 0.83 / 1.07 / 0.98  
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	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					100			
1	111	108	105	102	109	106	103	100	101	99	97	98	96	94	94	93	91	89					89			
2	104	98	92	88	102	96	91	87	92	88	85	89	86	83	86	84	81	79					79			
3	97	89	82	77	95	87	81	77	84	79	75	82	78	74	79	76	73	71					71			
4	91	81	74	69	88	80	73	68	77	72	67	75	70	66	73	69	66	64					64			
5	85	74	67	61	83	73	66	61	71	65	61	69	64	60	68	63	59	58					58			
6	79	68	61	56	78	67	60	55	66	60	55	64	59	54	63	58	54	52					52			
7	74	63	56	51	73	62	55	50	61	55	50	60	54	50	58	53	49	48					48			
8	70	58	51	46	69	58	51	46	57	50	46	56	50	46	54	49	45	44					44			
9	66	54	47	43	65	54	47	43	53	47	42	52	46	42	51	46	42	40					40			
10	62	51	44	39	61	50	44	39	50	43	39	49	43	39	48	43	39	37					37			

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

	0°	45°	90°
0°	4952	4952	4952
5°	4782	4862	4942
10°	4456	4632	4867
15°	4057	4334	4737
20°	3631	3977	4524
25°	3167	3550	4276
30°	2663	3113	4024
35°	2119	2639	3786
40°	1510	2152	3539
45°	900	1727	3170
50°	663	1315	2744
55°	555	895	2180
60°	449	737	1534
65°	358	633	822
70°	295	549	508
75°	281	531	476
80°	291	582	460
85°	418	835	579

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 3170 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	38.7	6.9
10°-20°	100.6	17.8
20°-30°	128.4	22.7
30°-40°	120.8	21.4
40°-50°	86.8	15.4
50°-60°	49.7	8.8
60°-70°	22.8	4.0
70°-80°	11.4	2.0
80°-90°	5.6	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
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0°-30°	267.7	47.4
0°-40°	388.5	68.8
0°-60°	525.0	93.0
0°-90°	564.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	564.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	422	422	422	422	422	
5°	406	414	412	416	419	38
15°	334	345	356	376	390	93
25°	244	256	274	304	330	112
35°	148	158	184	226	264	91
45°	54	66	104	153	191	45
55°	27	28	44	81	106	24
65°	13	18	23	25	30	13
75°	6	12	12	10	10	7
85°	3	6	6	6	4	3
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	421.7	421.7	421.7	421.7	421.7
2.5°	416.2	422.3	418.7	418.7	419.3
5°	405.7	413.7	412.5	415.6	419.3
7.5°	390.9	399.6	402.0	409.4	415.6
10°	373.7	383.6	388.5	400.2	408.2
12.5°	354.6	365.7	373.7	388.5	400.2
15°	333.7	345.4	356.5	375.6	389.7
17.5°	312.1	323.8	338.0	360.2	376.8
20°	290.6	302.3	318.3	341.7	362.0
22.5°	267.2	278.9	296.1	322.6	347.2
25°	244.4	255.5	274.0	303.5	330.0
27.5°	220.4	231.5	251.8	283.8	313.4
30°	196.4	207.5	229.6	264.1	296.8
32.5°	172.4	182.9	206.9	245.0	280.1
35°	147.8	158.2	184.1	226.0	264.1
37.5°	122.5	133.0	163.2	208.7	248.1
40°	98.5	110.2	140.4	191.5	230.9
42.5°	75.1	87.4	121.9	173.0	211.2
45°	54.2	65.9	104.0	153.3	190.9
47.5°	41.2	47.4	88.0	133.6	171.2
50°	36.3	36.9	72.0	115.7	150.2
52.5°	31.4	32.0	56.0	98.5	128.1
55°	27.1	27.7	43.7	80.7	106.5
57.5°	22.8	24.0	35.7	64.0	85.6
60°	19.1	21.5	31.4	48.6	65.3
62.5°	15.4	19.7	27.1	35.7	46.8
65°	12.9	17.9	22.8	25.2	29.6
67.5°	10.5	16.6	19.1	17.9	17.9
70°	8.6	14.8	16.0	14.8	14.8
72.5°	7.4	14.2	13.5	12.3	12.3
75°	6.2	12.3	11.7	10.5	10.5
77.5°	5.5	10.5	9.9	9.2	8.6
80°	4.3	8.6	8.6	8.0	6.8
82.5°	3.7	7.4	7.4	6.8	5.5
85°	3.1	6.2	6.2	5.5	4.3
87.5°	2.5	5.5	5.5	4.9	3.1
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	5.54	6.86	5.91	7.17	7.49	12.76	14.08	13.13	14.39	14.71
	3H	6.94	8.11	7.32	8.44	8.81	13.00	14.17	13.38	14.50	14.87
	4H	7.51	8.60	7.91	8.95	9.33	13.11	14.20	13.51	14.55	14.93
	6H	7.96	8.97	8.38	9.34	9.73	13.22	14.22	13.63	14.59	14.98
	8H	8.15	9.10	8.58	9.49	9.89	13.26	14.21	13.69	14.60	15.01
	12H	8.34	9.25	8.78	9.63	10.06	13.31	14.22	13.75	14.60	15.03
4H	2H	6.62	7.71	7.02	8.06	8.44	12.73	13.81	13.13	14.17	14.55
	3H	8.31	9.20	8.72	9.60	10.01	13.10	13.99	13.51	14.39	14.80
	4H	9.14	9.94	9.58	10.36	10.80	13.28	14.08	13.71	14.50	14.94
	6H	9.80	10.49	10.26	10.94	11.40	13.50	14.19	13.96	14.64	15.11
	8H	10.05	10.70	10.52	11.15	11.62	13.60	14.25	14.07	14.69	15.17
	12H	10.31	10.88	10.80	11.37	11.84	13.72	14.29	14.20	14.77	15.25
8H	4H	9.58	10.22	10.05	10.67	11.14	13.32	13.97	13.79	14.42	14.89
	6H	10.53	11.06	11.03	11.55	12.03	13.66	14.19	14.16	14.68	15.16
	8H	10.99	11.47	11.51	11.99	12.48	13.85	14.32	14.37	14.84	15.33
	12H	11.48	11.90	11.99	12.39	12.96	14.08	14.50	14.59	14.99	15.57
12H	4H	9.64	10.21	10.12	10.69	11.17	13.32	13.89	13.80	14.37	14.85
	6H	10.67	11.15	11.20	11.67	12.16	13.68	14.16	14.20	14.68	15.17
	8H	11.27	11.69	11.78	12.19	12.76	13.94	14.37	14.46	14.86	15.43