

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: P1059311

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

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1059311  
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-S560D940-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: 4000K CCT, 90 CRI LEDS  
Ballast/Driver: -

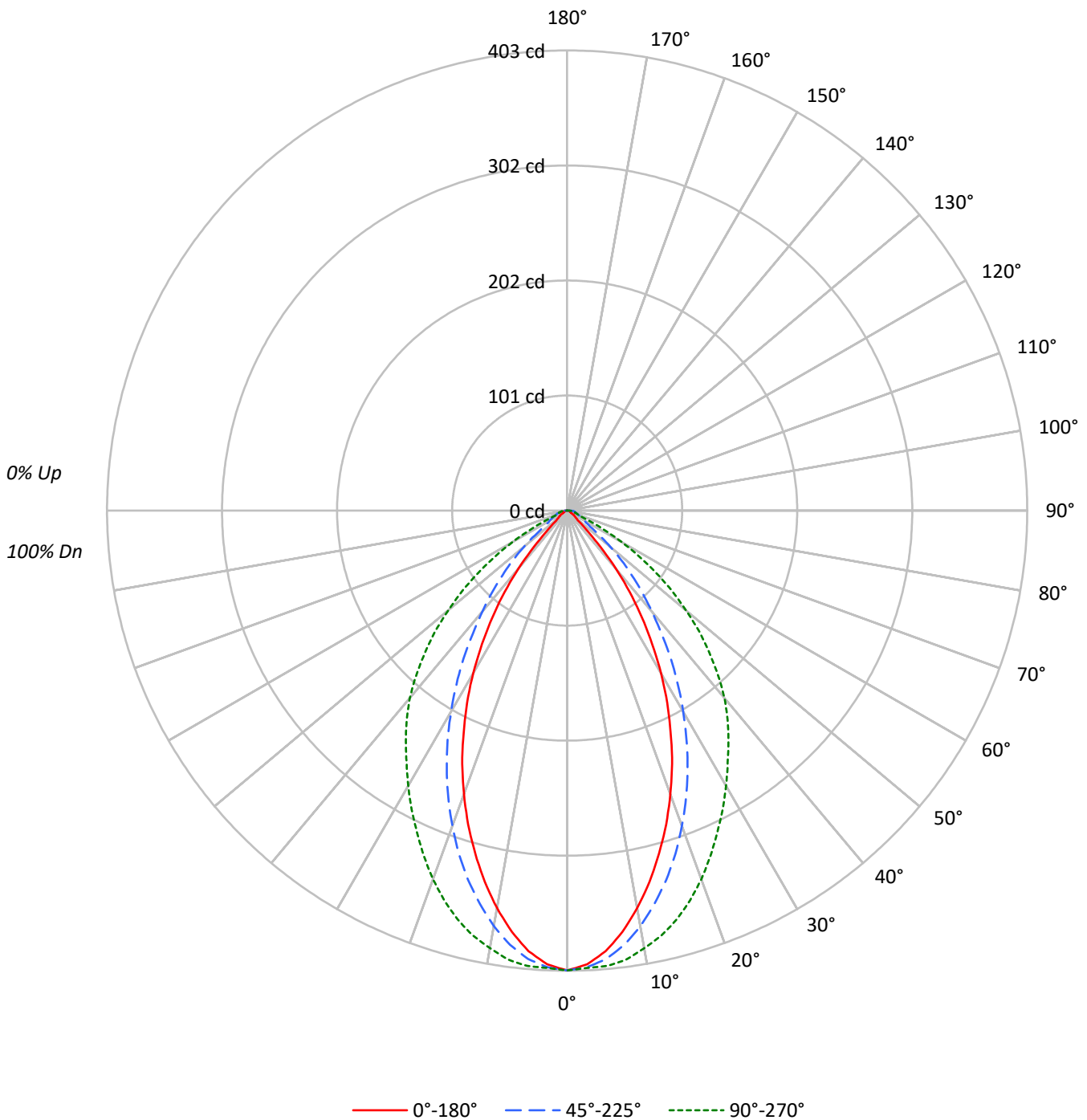
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 483.8 lumens  
Efficiency: N/A  
Efficacy: 24.7 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°	4729	4729	4729
5°	4565	4645	4718
10°	4215	4406	4641
15°	3781	4072	4506
20°	3301	3670	4294
25°	2777	3231	4029
30°	2229	2755	3773
35°	1633	2269	3531
40°	1010	1766	3285
45°	389	1330	2924
50°	192	912	2475
55°	151	504	1941
60°	101	420	1301
65°	86	375	581
70°	86	340	340
75°	113	363	336
80°	169	460	372
85°	243	741	498

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 2924 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	36.9	7.6
10°-20°	94.5	19.5
20°-30°	117.3	24.3
30°-40°	105.1	21.7
40°-50°	69.1	14.3
50°-60°	34.6	7.2
60°-70°	13.7	2.8
70°-80°	7.7	1.6
80°-90°	4.8	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°	248.8	51.4
0°-40°	353.9	73.2
0°-60°	457.6	94.6
0°-90°	483.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	483.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	403	403	403	403	403	
5°	387	394	394	397	400	36
15°	311	321	335	358	371	87
25°	214	228	249	284	311	98
35°	114	129	158	207	246	71
45°	23	39	80	135	176	22
55°	7	9	25	66	95	7
65°	3	9	14	17	21	3
75°	2	8	8	7	7	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°	402.7	402.7	402.7	402.7	402.7
2.5°	397.8	403.3	400.3	400.3	400.9
5°	387.3	393.5	394.1	396.6	400.3
7.5°	371.9	379.9	383.6	391.0	396.6
10°	353.5	362.1	369.5	382.4	389.2
12.5°	333.1	341.8	352.8	370.7	381.2
15°	311.0	320.8	335.0	357.8	370.7
17.5°	288.2	298.0	315.3	341.1	357.8
20°	264.2	275.3	293.7	323.3	343.6
22.5°	240.2	252.5	272.2	304.2	327.6
25°	214.3	227.8	249.4	284.5	311.0
27.5°	189.7	203.8	226.6	264.8	295.0
30°	164.4	178.6	203.2	244.5	278.3
32.5°	138.6	154.6	180.4	225.4	261.7
35°	113.9	129.3	158.3	206.9	246.3
37.5°	89.9	105.3	135.5	189.0	230.9
40°	65.9	81.9	115.2	171.8	214.3
42.5°	43.1	59.7	97.3	154.6	195.8
45°	23.4	38.8	80.1	134.9	176.1
47.5°	12.9	20.9	64.7	116.4	157.0
50°	10.5	11.7	49.9	99.1	135.5
52.5°	8.6	9.9	35.7	82.5	115.8
55°	7.4	8.6	24.6	66.5	94.8
57.5°	6.2	7.4	19.7	51.1	74.5
60°	4.3	7.4	17.9	37.6	55.4
62.5°	3.7	7.4	15.4	25.9	36.9
65°	3.1	8.6	13.5	17.2	20.9
67.5°	2.5	8.6	11.7	11.1	11.1
70°	2.5	8.6	9.9	9.2	9.9
72.5°	2.5	9.2	9.2	8.6	8.6
75°	2.5	8.0	8.0	7.4	7.4
77.5°	2.5	7.4	7.4	6.8	6.8
80°	2.5	6.8	6.8	6.2	5.5
82.5°	2.5	6.2	6.2	5.5	4.9
85°	1.8	5.5	5.5	5.5	3.7
87.5°	1.8	4.9	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	0.00	0.00	0.00	0.00	0.00	11.94	13.20	12.31	13.51	13.83
	3H	0.39	1.50	0.77	1.84	2.20	12.02	13.14	12.40	13.47	13.83
	4H	1.56	2.60	1.97	2.95	3.33	12.09	13.12	12.49	13.47	13.86
	6H	2.63	3.58	3.04	3.95	4.34	12.18	13.14	12.60	13.51	13.90
	8H	3.17	4.07	3.61	4.47	4.87	12.24	13.14	12.68	13.53	13.94
	12H	3.64	4.50	4.08	4.89	5.32	12.31	13.17	12.75	13.56	13.99
4H	2H	1.11	2.14	1.51	2.50	2.88	11.80	12.84	12.21	13.19	13.57
	3H	3.57	4.42	3.99	4.83	5.23	11.98	12.82	12.39	13.23	13.63
	4H	4.92	5.68	5.36	6.10	6.54	12.11	12.86	12.54	13.28	13.73
	6H	6.07	6.72	6.53	7.17	7.64	12.32	12.98	12.79	13.42	13.89
	8H	6.59	7.20	7.06	7.64	8.12	12.45	13.06	12.92	13.50	13.98
	12H	7.03	7.57	7.52	8.06	8.53	12.60	13.14	13.09	13.63	14.10
8H	4H	5.84	6.45	6.31	6.90	7.37	12.11	12.72	12.58	13.17	13.64
	6H	7.45	7.95	7.96	8.45	8.93	12.44	12.94	12.94	13.44	13.92
	8H	8.29	8.74	8.81	9.26	9.75	12.67	13.12	13.19	13.63	14.13
	12H	9.06	9.46	9.57	9.95	10.52	12.99	13.39	13.50	13.88	14.46
12H	4H	6.01	6.55	6.50	7.03	7.51	12.10	12.64	12.59	13.12	13.60
	6H	7.77	8.22	8.30	8.74	9.23	12.47	12.92	13.00	13.44	13.93
	8H	8.79	9.19	9.30	9.68	10.25	12.78	13.18	13.30	13.67	14.25