

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: P1059719

Luminaire Tested: S123RDR-H560D940-X4F0-XX-UDD-SVL-S

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059719
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: S123RDR-H560D940-X4F0-XX-UDD-SVL-S
Description: DEFINE 3 SILVER REGRESSED DIRECT RECESSED HOUSING WITH SILVER STRAIGHT BLADE
LOUVER WITH DIFFUSER
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: -

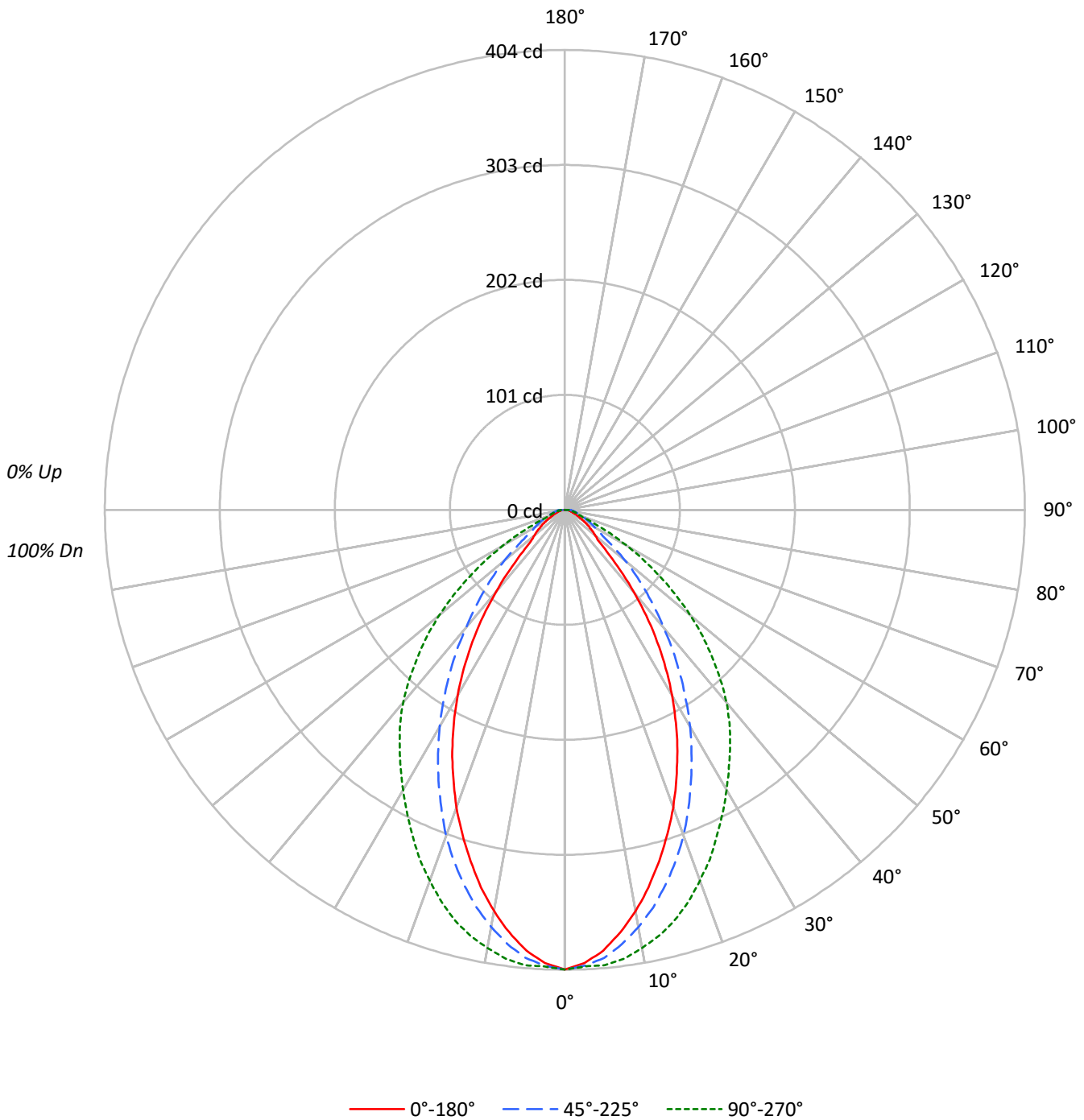
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 540.8 lumens
Efficiency: N/A
Efficacy: 31.1 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): 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

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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	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°	4742	4742	4742
5°	4579	4656	4733
10°	4266	4436	4660
15°	3884	4149	4537
20°	3476	3809	4331
25°	3032	3398	4094
30°	2550	2982	3852
35°	2028	2527	3625
40°	1445	2060	3389
45°	862	1654	3034
50°	636	1260	2627
55°	530	858	2088
60°	430	707	1468
65°	345	606	786
70°	285	525	484
75°	268	508	454
80°	277	561	440
85°	391	795	552

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 3034 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	37.1	6.9
10°-20°	96.4	17.8
20°-30°	122.9	22.7
30°-40°	115.6	21.4
40°-50°	83.1	15.4
50°-60°	47.6	8.8
60°-70°	21.8	4.0
70°-80°	10.9	2.0
80°-90°	5.3	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°	256.4	47.4
0°-40°	372.0	68.8
0°-60°	502.7	93.0
0°-90°	540.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	540.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	404	404	404	404	404	
5°	388	396	395	398	402	36
15°	320	331	341	360	373	89
25°	234	245	262	291	316	107
35°	142	152	176	216	253	88
45°	52	63	100	147	183	43
55°	26	26	42	77	102	23
65°	12	17	22	24	28	12
75°	6	12	11	10	10	6
85°	3	6	6	5	4	3
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	403.8	403.8	403.8	403.8	403.8
2.5°	398.5	404.4	400.9	400.9	401.5
5°	388.5	396.1	395.0	397.9	401.5
7.5°	374.3	382.6	384.9	392.0	397.9
10°	357.8	367.3	372.0	383.2	390.8
12.5°	339.6	350.2	357.8	372.0	383.2
15°	319.5	330.7	341.3	359.6	373.2
17.5°	298.9	310.1	323.6	344.9	360.8
20°	278.2	289.4	304.8	327.2	346.6
22.5°	255.8	267.0	283.6	308.9	332.5
25°	234.0	244.6	262.3	290.6	316.0
27.5°	211.0	221.7	241.1	271.8	300.1
30°	188.1	198.7	219.9	252.9	284.1
32.5°	165.1	175.1	198.1	234.6	268.2
35°	141.5	151.5	176.3	216.3	252.9
37.5°	117.3	127.3	156.2	199.8	237.6
40°	94.3	105.5	134.4	183.3	221.1
42.5°	71.9	83.7	116.7	165.6	202.2
45°	51.9	63.1	99.6	146.8	182.7
47.5°	39.5	45.4	84.3	127.9	163.9
50°	34.8	35.4	69.0	110.8	143.8
52.5°	30.1	30.7	53.6	94.3	122.6
55°	25.9	26.5	41.9	77.2	102.0
57.5°	21.8	23.0	34.2	61.3	81.9
60°	18.3	20.6	30.1	46.6	62.5
62.5°	14.7	18.9	25.9	34.2	44.8
65°	12.4	17.1	21.8	24.2	28.3
67.5°	10.0	15.9	18.3	17.1	17.1
70°	8.3	14.1	15.3	14.1	14.1
72.5°	7.1	13.6	13.0	11.8	11.8
75°	5.9	11.8	11.2	10.0	10.0
77.5°	5.3	10.0	9.4	8.8	8.3
80°	4.1	8.3	8.3	7.7	6.5
82.5°	3.5	7.1	7.1	6.5	5.3
85°	2.9	5.9	5.9	5.3	4.1
87.5°	2.4	5.3	5.3	4.7	2.9
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	5.39	6.71	5.76	7.02	7.34	12.61	13.93	12.98	14.24	14.56
	3H	6.79	7.96	7.17	8.29	8.65	12.85	14.02	13.23	14.35	14.71
	4H	7.35	8.44	7.76	8.79	9.18	12.96	14.05	13.36	14.40	14.78
	6H	7.81	8.81	8.23	9.18	9.58	13.06	14.07	13.48	14.44	14.83
	8H	8.00	8.95	8.43	9.34	9.74	13.11	14.06	13.54	14.45	14.86
	12H	8.18	9.09	8.62	9.47	9.90	13.16	14.07	13.60	14.45	14.88
4H	2H	6.47	7.55	6.87	7.91	8.29	12.57	13.66	12.98	14.02	14.40
	3H	8.15	9.05	8.57	9.45	9.85	12.94	13.84	13.36	14.24	14.64
	4H	8.99	9.79	9.42	10.21	10.65	13.12	13.92	13.56	14.34	14.79
	6H	9.65	10.34	10.11	10.78	11.25	13.35	14.04	13.81	14.49	14.95
	8H	9.90	10.55	10.37	10.99	11.46	13.45	14.10	13.92	14.54	15.01
	12H	10.15	10.72	10.64	11.21	11.68	13.57	14.14	14.05	14.62	15.09
8H	4H	9.42	10.07	9.89	10.52	10.99	13.17	13.82	13.64	14.26	14.73
	6H	10.38	10.91	10.88	11.40	11.89	13.50	14.03	14.01	14.53	15.01
	8H	10.84	11.32	11.36	11.84	12.33	13.70	14.17	14.22	14.69	15.18
	12H	11.32	11.74	11.83	12.24	12.81	13.93	14.35	14.44	14.84	15.42
12H	4H	9.48	10.05	9.97	10.54	11.01	13.16	13.73	13.65	14.22	14.69
	6H	10.53	11.00	11.05	11.52	12.01	13.53	14.01	14.05	14.52	15.02
	8H	11.12	11.54	11.64	12.04	12.61	13.79	14.22	14.31	14.71	15.28