

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: P1059673

Luminaire Tested: S123RDR-H560D840-X4F0-XX-UDD-SVL-B

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059673
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2406-143-29)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123RDR-H560D840-X4F0-XX-UDD-SVL-B
Description: DEFINE 3 BLACK REGRESSED DIRECT RECESSED HOUSING WITH SILVER STRAIGHT BLADE LOUVER WITH DIFFUSER
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

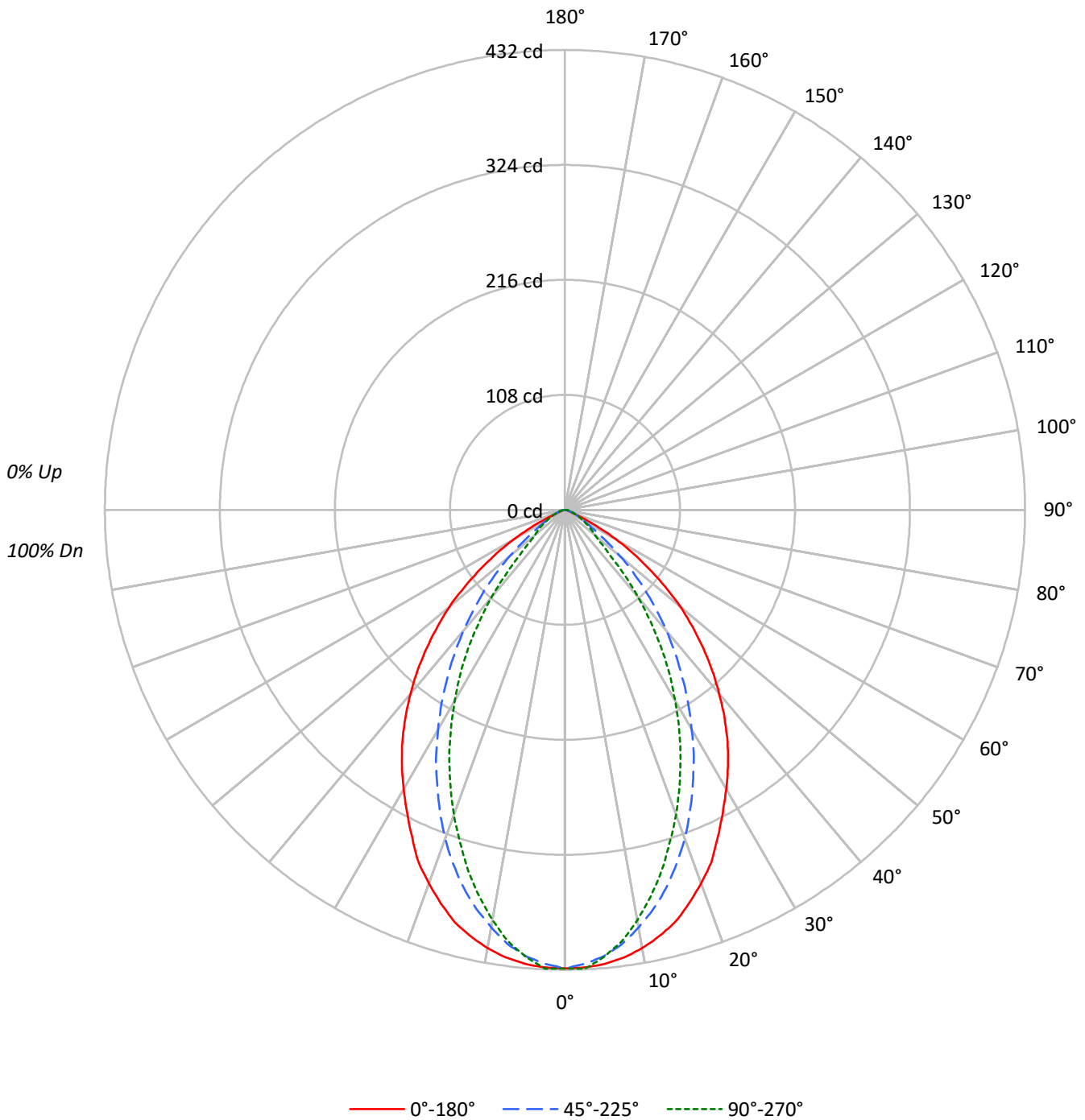
Lumens per Lamp: N/A
Luminaire Lumens: 556.2 lumens
Efficiency: N/A
Efficacy: 32.0 lumens/watt
Spacing Criteria (0/90/45): 1.08 / 0.85 / 0.98
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

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	112	109	106	103	110	107	104	102	103	100	98	99	97	95	95	94	93	91				91
2	105	99	94	90	103	97	93	89	94	90	87	91	88	85	88	86	83	82				82
3	98	90	84	80	96	89	83	79	86	82	78	84	80	76	81	78	75	73				73
4	92	83	76	71	90	82	75	71	79	74	70	77	73	69	75	71	68	66				66
5	86	76	69	64	84	75	68	63	73	67	63	71	66	62	70	65	62	60				60
6	81	70	63	58	79	69	62	58	68	62	57	66	61	57	65	60	56	55				55
7	76	65	58	53	74	64	57	53	63	57	52	61	56	52	60	55	52	50				50
8	71	60	53	48	70	60	53	48	58	52	48	57	52	48	56	51	48	46				46
9	67	56	49	45	66	56	49	44	55	49	44	54	48	44	53	48	44	42				42
10	64	52	46	41	63	52	46	41	51	45	41	50	45	41	49	44	41	39				39

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5059	5059	5059
5°	5047	4960	4968
10°	4985	4747	4668
15°	4872	4468	4265
20°	4667	4109	3809
25°	4399	3681	3327
30°	4106	3228	2803
35°	3815	2754	2256
40°	3455	2270	1636
45°	3046	1760	986
50°	2583	1231	670
55°	1965	737	559
60°	1285	470	439
65°	536	353	353
70°	182	251	275
75°	150	181	213
80°	88	135	183
85°	94	94	175

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3046 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	39.8	7.2
10°-20°	104.1	18.7
20°-30°	133.5	24.0
30°-40°	125.3	22.5
40°-50°	87.4	15.7
50°-60°	45.2	8.1
60°-70°	15.4	2.8
70°-80°	4.4	0.8
80°-90°	0.9	0.2
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°	277.5	49.9
0°-40°	402.8	72.4
0°-60°	535.4	96.3
0°-90°	556.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	556.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	431	431	431	431	431	
5°	428	428	421	423	422	41
15°	401	391	368	356	351	112
25°	340	318	284	265	257	156
35°	266	233	192	167	157	166
45°	183	150	106	73	59	141
55°	96	72	36	28	27	86
65°	19	17	13	12	13	23
75°	3	3	4	5	5	3
85°	1	1	1	1	1	1
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	430.8	430.8	430.8	430.8	430.8
2.5°	430.2	430.8	426.8	430.8	431.5
5°	428.2	427.5	420.8	422.8	421.5
7.5°	424.2	422.2	411.5	408.8	408.8
10°	418.1	414.1	398.1	393.5	391.5
12.5°	410.1	404.8	384.1	375.5	372.1
15°	400.8	390.8	367.5	355.5	350.8
17.5°	387.5	374.1	348.8	334.8	327.5
20°	373.5	356.8	328.8	312.1	304.8
22.5°	358.8	338.8	306.8	288.8	280.8
25°	339.5	318.1	284.1	264.8	256.8
27.5°	320.8	298.1	262.1	240.1	232.1
30°	302.8	276.1	238.1	216.7	206.7
32.5°	284.8	254.8	215.4	192.1	182.7
35°	266.1	233.4	192.1	167.4	157.4
37.5°	246.1	212.7	170.1	143.4	131.4
40°	225.4	190.7	148.1	118.0	106.7
42.5°	204.7	170.7	126.0	95.4	82.0
45°	183.4	150.1	106.0	73.4	59.4
47.5°	162.1	129.4	86.7	53.4	44.7
50°	141.4	110.0	67.4	39.3	36.7
52.5°	118.7	91.4	50.7	32.7	32.0
55°	96.0	72.0	36.0	28.0	27.3
57.5°	76.0	56.0	26.0	23.3	22.7
60°	54.7	40.0	20.0	19.3	18.7
62.5°	36.0	27.3	16.0	15.3	15.3
65°	19.3	16.7	12.7	12.0	12.7
67.5°	8.0	9.3	9.3	10.0	10.0
70°	5.3	6.0	7.3	8.0	8.0
72.5°	4.0	4.7	5.3	6.0	6.0
75°	3.3	3.3	4.0	4.7	4.7
77.5°	2.0	2.7	2.7	3.3	4.0
80°	1.3	2.0	2.0	2.7	2.7
82.5°	0.7	1.3	1.3	2.0	2.0
85°	0.7	0.7	0.7	0.7	1.3
87.5°	0.0	0.0	0.0	0.0	0.7
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	11.96	13.22	12.33	13.53	13.85	5.46	6.72	5.83	7.03	7.35
	3H	11.91	13.02	12.30	13.35	13.72	6.24	7.35	6.62	7.68	8.04
	4H	11.86	12.89	12.27	13.24	13.63	6.44	7.47	6.85	7.82	8.21
	6H	11.79	12.74	12.21	13.11	13.50	6.59	7.53	7.00	7.90	8.30
	8H	11.75	12.64	12.18	13.03	13.44	6.62	7.52	7.06	7.91	8.31
	12H	11.71	12.56	12.14	12.94	13.37	6.64	7.49	7.07	7.88	8.31
4H	2H	11.81	12.84	12.21	13.19	13.58	5.72	6.75	6.13	7.10	7.49
	3H	11.79	12.63	12.21	13.03	13.44	6.63	7.46	7.04	7.87	8.27
	4H	11.74	12.48	12.18	12.90	13.35	6.91	7.65	7.34	8.07	8.51
	6H	11.68	12.32	12.15	12.77	13.24	7.12	7.76	7.59	8.21	8.68
	8H	11.63	12.23	12.10	12.68	13.15	7.18	7.78	7.66	8.23	8.70
	12H	11.59	12.11	12.08	12.60	13.07	7.22	7.75	7.71	8.23	8.71
8H	4H	11.63	12.22	12.10	12.67	13.14	6.89	7.48	7.36	7.93	8.40
	6H	11.57	12.05	12.07	12.55	13.03	7.16	7.64	7.66	8.14	8.63
	8H	11.51	11.95	12.04	12.47	12.96	7.27	7.70	7.79	8.22	8.71
	12H	11.48	11.86	11.99	12.36	12.93	7.34	7.73	7.86	8.22	8.80
12H	4H	11.58	12.11	12.07	12.59	13.07	6.85	7.38	7.34	7.86	8.33
	6H	11.51	11.94	12.03	12.46	12.95	7.12	7.56	7.65	8.07	8.57
	8H	11.48	11.86	11.99	12.36	12.93	7.26	7.65	7.78	8.14	8.71