

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: P1059475

Luminaire Tested: S123RDR-H1000D940-X4F0-XX-UDD-SVL-B

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059475
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-H1000D940-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, 90 CRI LEDS
Ballast/Driver: -

Summary

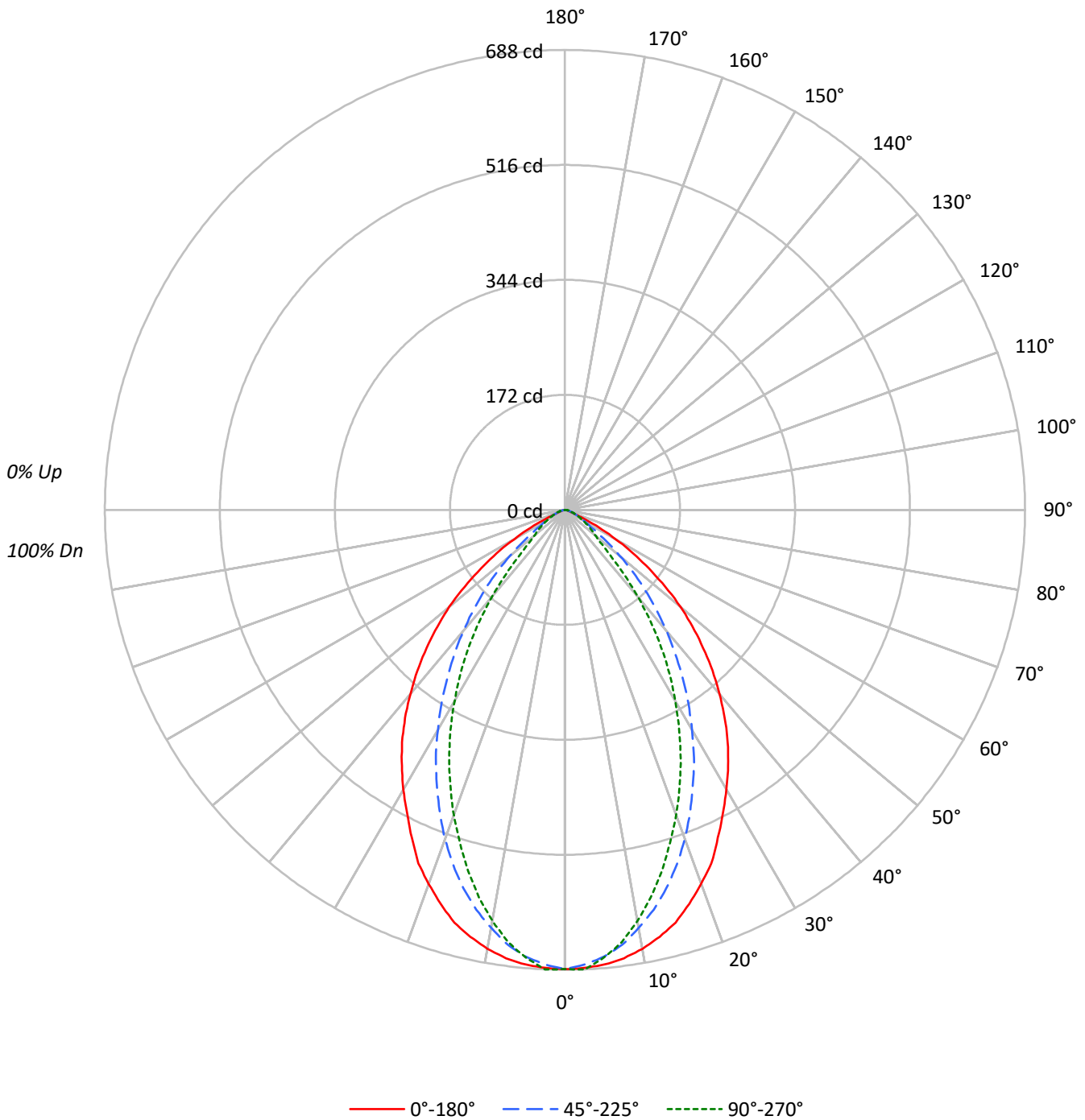
Lumens per Lamp: N/A
Luminaire Lumens: 887.0 lumens
Efficiency: N/A
Efficacy: 28.4 lumens/watt
Spacing Criteria (0/90/45): 1.08 / 0.85 / 0.98
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 31.2
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				
1	112	109	106	103	110	107	104	102	103	100	98	99	97	95	95	94	93	91				
2	105	99	94	90	103	97	93	89	94	90	87	91	88	85	88	86	83	82				
3	98	90	84	80	96	89	83	79	86	82	78	84	80	76	81	78	75	73				
4	92	83	76	71	90	82	75	70	79	74	70	77	73	69	75	71	68	66				
5	86	76	69	64	84	75	68	63	73	67	63	71	66	62	70	65	62	60				
6	81	70	63	58	79	69	62	58	68	62	57	66	61	57	65	60	56	55				
7	76	65	58	53	74	64	57	53	63	57	52	61	56	52	60	55	52	50				
8	71	60	53	48	70	60	53	48	58	52	48	57	52	48	56	51	48	46				
9	67	56	49	45	66	56	49	44	55	48	44	54	48	44	53	48	44	42				
10	64	52	46	41	63	52	46	41	51	45	41	50	45	41	49	44	41	39				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8068	8068	8068
5°	8048	7910	7923
10°	7952	7571	7444
15°	7771	7124	6800
20°	7443	6552	6074
25°	7015	5871	5306
30°	6548	5148	4470
35°	6084	4391	3598
40°	5511	3619	2609
45°	4857	2808	1573
50°	4119	1962	1069
55°	3136	1175	893
60°	2048	749	700
65°	856	561	561
70°	292	402	439
75°	240	290	336
80°	142	216	291
85°	148	148	283

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4857 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	63.5	7.2
10°-20°	166.1	18.7
20°-30°	213.0	24.0
30°-40°	199.8	22.5
40°-50°	139.4	15.7
50°-60°	72.1	8.1
60°-70°	24.7	2.8
70°-80°	7.0	0.8
80°-90°	1.5	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°	442.5	49.9
0°-40°	642.3	72.4
0°-60°	853.8	96.3
0°-90°	887.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	887.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	687	687	687	687	687	
5°	683	682	671	674	672	65
15°	639	623	586	567	559	179
25°	541	507	453	422	410	249
35°	424	372	306	267	251	264
45°	292	239	169	117	95	225
55°	153	115	57	45	44	138
65°	31	27	20	19	20	36
75°	5	5	6	7	7	5
85°	1	1	1	1	2	1
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	687.1	687.1	687.1	687.1	687.1
2.5°	686.0	687.1	680.7	687.1	688.1
5°	682.8	681.8	671.1	674.3	672.2
7.5°	676.4	673.2	656.2	652.0	652.0
10°	666.9	660.5	635.0	627.5	624.3
12.5°	654.1	645.6	612.6	598.8	593.5
15°	639.2	623.3	586.0	566.9	559.4
17.5°	617.9	596.7	556.3	533.9	522.2
20°	595.6	569.0	524.3	497.8	486.1
22.5°	572.2	540.3	489.2	460.5	447.8
25°	541.4	507.3	453.1	422.2	409.5
27.5°	511.6	475.4	418.0	382.9	370.1
30°	482.9	440.3	379.7	345.7	329.7
32.5°	454.1	406.3	343.5	306.3	291.4
35°	424.4	372.3	306.3	267.0	251.0
37.5°	392.5	339.3	271.2	228.7	209.5
40°	359.5	304.2	236.1	188.3	170.2
42.5°	326.5	272.3	201.0	152.1	130.8
45°	292.5	239.3	169.1	117.0	94.7
47.5°	258.5	206.3	138.3	85.1	71.3
50°	225.5	175.5	107.4	62.8	58.5
52.5°	189.3	145.7	80.8	52.1	51.1
55°	153.2	114.9	57.4	44.7	43.6
57.5°	121.2	89.3	41.5	37.2	36.2
60°	87.2	63.8	31.9	30.8	29.8
62.5°	57.4	43.6	25.5	24.5	24.5
65°	30.8	26.6	20.2	19.1	20.2
67.5°	12.8	14.9	14.9	16.0	16.0
70°	8.5	9.6	11.7	12.8	12.8
72.5°	6.4	7.4	8.5	9.6	9.6
75°	5.3	5.3	6.4	7.4	7.4
77.5°	3.2	4.3	4.3	5.3	6.4
80°	2.1	3.2	3.2	4.3	4.3
82.5°	1.1	2.1	2.1	3.2	3.2
85°	1.1	1.1	1.1	1.1	2.1
87.5°	0.0	0.0	0.0	0.0	1.1
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	13.58	14.84	13.95	15.16	15.47	7.09	8.35	7.45	8.66	8.98
	3H	13.54	14.65	13.92	14.98	15.34	7.87	8.98	8.25	9.31	9.67
	4H	13.48	14.51	13.89	14.87	15.25	8.07	9.10	8.47	9.45	9.84
	6H	13.41	14.36	13.83	14.73	15.12	8.22	9.16	8.63	9.53	9.92
	8H	13.37	14.26	13.80	14.65	15.06	8.25	9.14	8.68	9.54	9.94
	12H	13.33	14.18	13.76	14.56	14.99	8.27	9.12	8.70	9.50	9.93
4H	2H	13.43	14.46	13.83	14.81	15.20	7.35	8.38	7.75	8.73	9.11
	3H	13.42	14.25	13.83	14.66	15.06	8.26	9.09	8.67	9.50	9.90
	4H	13.36	14.11	13.80	14.53	14.97	8.53	9.27	8.96	9.69	10.14
	6H	13.31	13.94	13.77	14.39	14.86	8.75	9.39	9.21	9.83	10.30
	8H	13.25	13.85	13.73	14.30	14.77	8.81	9.41	9.28	9.85	10.33
	12H	13.21	13.73	13.70	14.22	14.69	8.85	9.37	9.34	9.86	10.33
8H	4H	13.25	13.85	13.72	14.29	14.77	8.51	9.11	8.98	9.56	10.03
	6H	13.19	13.67	13.69	14.17	14.65	8.79	9.27	9.29	9.77	10.25
	8H	13.14	13.57	13.66	14.09	14.58	8.89	9.33	9.42	9.85	10.34
	12H	13.10	13.49	13.62	13.98	14.55	8.97	9.35	9.48	9.85	10.42
12H	4H	13.21	13.73	13.69	14.21	14.69	8.48	9.00	8.96	9.48	9.96
	6H	13.13	13.57	13.66	14.08	14.58	8.75	9.18	9.27	9.70	10.19
	8H	13.10	13.49	13.62	13.98	14.55	8.89	9.27	9.40	9.77	10.34