

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: P1059599

Luminaire Tested: S123RDR-H340D850-X4F0-XX-UDD-BVL-S

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059599
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: S123RDR-H340D850-X4F0-XX-UDD-BVL-S
Description: DEFINE 3 SILVER REGRESSED DIRECT RECESSED HOUSING WITH BLACK STRAIGHT BLADE LOUVER WITH DIFFUSER
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 5000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

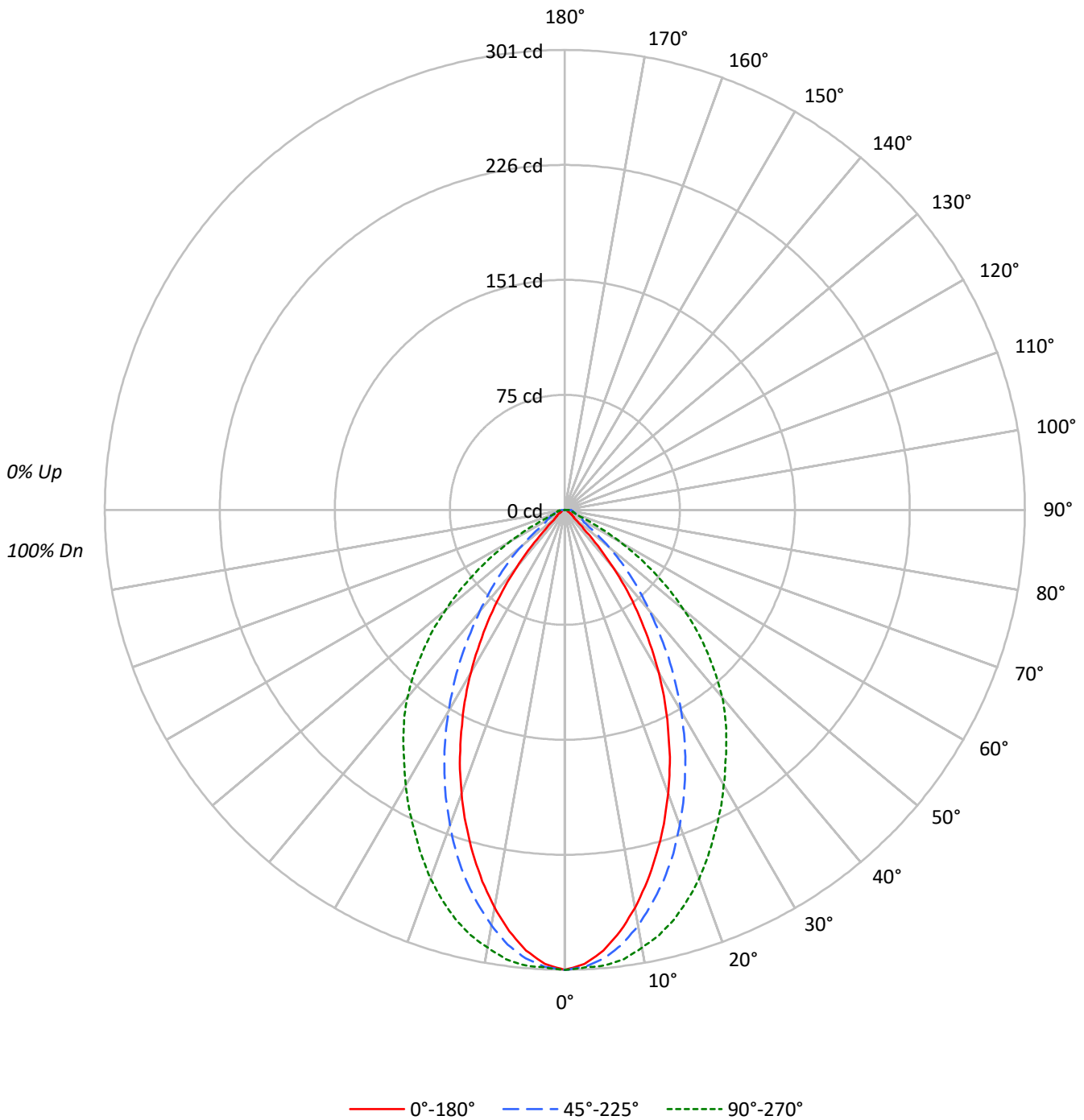
Lumens per Lamp: N/A
Luminaire Lumens: 361.7 lumens
Efficiency: N/A
Efficacy: 30.9 lumens/watt
Spacing Criteria (0/90/45): 0.79 / 1.06 / 0.94
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 11.7
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	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°	3536	3536	3536
5°	3414	3474	3528
10°	3151	3294	3470
15°	2826	3045	3370
20°	2468	2744	3210
25°	2076	2416	3012
30°	1666	2061	2822
35°	1221	1696	2640
40°	756	1320	2456
45°	291	995	2187
50°	142	681	1851
55°	113	377	1451
60°	75	315	972
65°	64	281	436
70°	62	254	254
75°	82	272	250
80°	122	345	277
85°	189	552	377

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 2187 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	27.6	7.6
10°-20°	70.7	19.5
20°-30°	87.7	24.3
30°-40°	78.6	21.7
40°-50°	51.7	14.3
50°-60°	25.9	7.2
60°-70°	10.2	2.8
70°-80°	5.7	1.6
80°-90°	3.6	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
0°-30°	186.0	51.4
0°-40°	264.6	73.2
0°-60°	342.2	94.6
0°-90°	361.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	361.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	301	301	301	301	301	
5°	290	294	295	296	299	27
15°	232	240	250	268	277	65
25°	160	170	186	213	232	73
35°	85	97	118	155	184	53
45°	18	29	60	101	132	17
55°	6	6	18	50	71	5
65°	2	6	10	13	16	2
75°	2	6	6	6	6	2
85°	1	4	4	4	3	1
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	301.1	301.1	301.1	301.1	301.1
2.5°	297.5	301.6	299.3	299.3	299.8
5°	289.6	294.2	294.7	296.5	299.3
7.5°	278.1	284.1	286.9	292.4	296.5
10°	264.3	270.8	276.3	286.0	291.0
12.5°	249.1	255.6	263.8	277.2	285.0
15°	232.5	239.9	250.5	267.5	277.2
17.5°	215.5	222.9	235.8	255.1	267.5
20°	197.5	205.8	219.6	241.7	256.9
22.5°	179.6	188.8	203.5	227.5	245.0
25°	160.2	170.4	186.5	212.7	232.5
27.5°	141.8	152.4	169.5	198.0	220.6
30°	122.9	133.5	152.0	182.8	208.1
32.5°	103.6	115.6	134.9	168.5	195.7
35°	85.2	96.7	118.3	154.7	184.2
37.5°	67.2	78.7	101.3	141.4	172.7
40°	49.3	61.2	86.1	128.5	160.2
42.5°	32.2	44.7	72.8	115.6	146.4
45°	17.5	29.0	59.9	100.8	131.7
47.5°	9.7	15.7	48.3	87.0	117.4
50°	7.8	8.7	37.3	74.1	101.3
52.5°	6.4	7.4	26.7	61.7	86.6
55°	5.5	6.4	18.4	49.7	70.9
57.5°	4.6	5.5	14.7	38.2	55.7
60°	3.2	5.5	13.4	28.1	41.4
62.5°	2.8	5.5	11.5	19.3	27.6
65°	2.3	6.4	10.1	12.9	15.7
67.5°	1.8	6.4	8.7	8.3	8.3
70°	1.8	6.4	7.4	6.9	7.4
72.5°	1.8	6.9	6.9	6.4	6.4
75°	1.8	6.0	6.0	5.5	5.5
77.5°	1.8	5.5	5.5	5.1	5.1
80°	1.8	5.1	5.1	4.6	4.1
82.5°	1.8	4.6	4.6	4.1	3.7
85°	1.4	4.1	4.1	4.1	2.8
87.5°	1.4	3.7	4.1	3.7	2.3
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	10.93	12.19	11.30	12.50	12.82
	3H	0.00	0.43	0.00	0.76	1.13	11.01	12.12	11.39	12.46	12.82
	4H	0.49	1.52	0.89	1.87	2.26	11.07	12.11	11.48	12.46	12.85
	6H	1.53	2.48	1.94	2.85	3.25	11.17	12.12	11.59	12.49	12.89
	8H	2.06	2.96	2.49	3.35	3.76	11.23	12.13	11.66	12.52	12.93
	12H	2.55	3.41	2.98	3.79	4.22	11.30	12.16	11.74	12.55	12.98
4H	2H	0.09	1.12	0.49	1.47	1.86	10.79	11.83	11.20	12.18	12.56
	3H	2.54	3.39	2.95	3.79	4.20	10.97	11.81	11.38	12.22	12.62
	4H	3.89	4.65	4.33	5.07	5.51	11.09	11.85	11.53	12.27	12.71
	6H	5.02	5.68	5.49	6.12	6.59	11.31	11.96	11.77	12.41	12.88
	8H	5.53	6.14	6.00	6.59	7.06	11.43	12.04	11.90	12.49	12.96
	12H	5.98	6.52	6.47	7.01	7.48	11.59	12.13	12.08	12.62	13.09
8H	4H	4.81	5.43	5.28	5.87	6.34	11.10	11.71	11.57	12.15	12.63
	6H	6.42	6.92	6.92	7.42	7.90	11.43	11.93	11.93	12.43	12.91
	8H	7.24	7.69	7.77	8.21	8.70	11.65	12.10	12.18	12.62	13.11
	12H	8.02	8.42	8.53	8.91	9.48	11.98	12.38	12.49	12.87	13.45
12H	4H	4.98	5.52	5.47	6.01	6.48	11.09	11.62	11.57	12.11	12.58
	6H	6.74	7.19	7.26	7.71	8.20	11.46	11.91	11.98	12.43	12.92
	8H	7.74	8.14	8.26	8.64	9.21	11.76	12.16	12.28	12.66	13.23