

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: P1059603

Luminaire Tested: S123RDR-H340D850-X4F0-XX-UDD-SVL-W

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059603
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-65)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123RDR-H340D850-X4F0-XX-UDD-SVL-W
Description: DEFINE 3 WHITE REGRESSED DIRECT RECESSED HOUSING WITH SILVER STRAIGHT BLADE
LOUVER WITH DIFFUSER
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 5000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

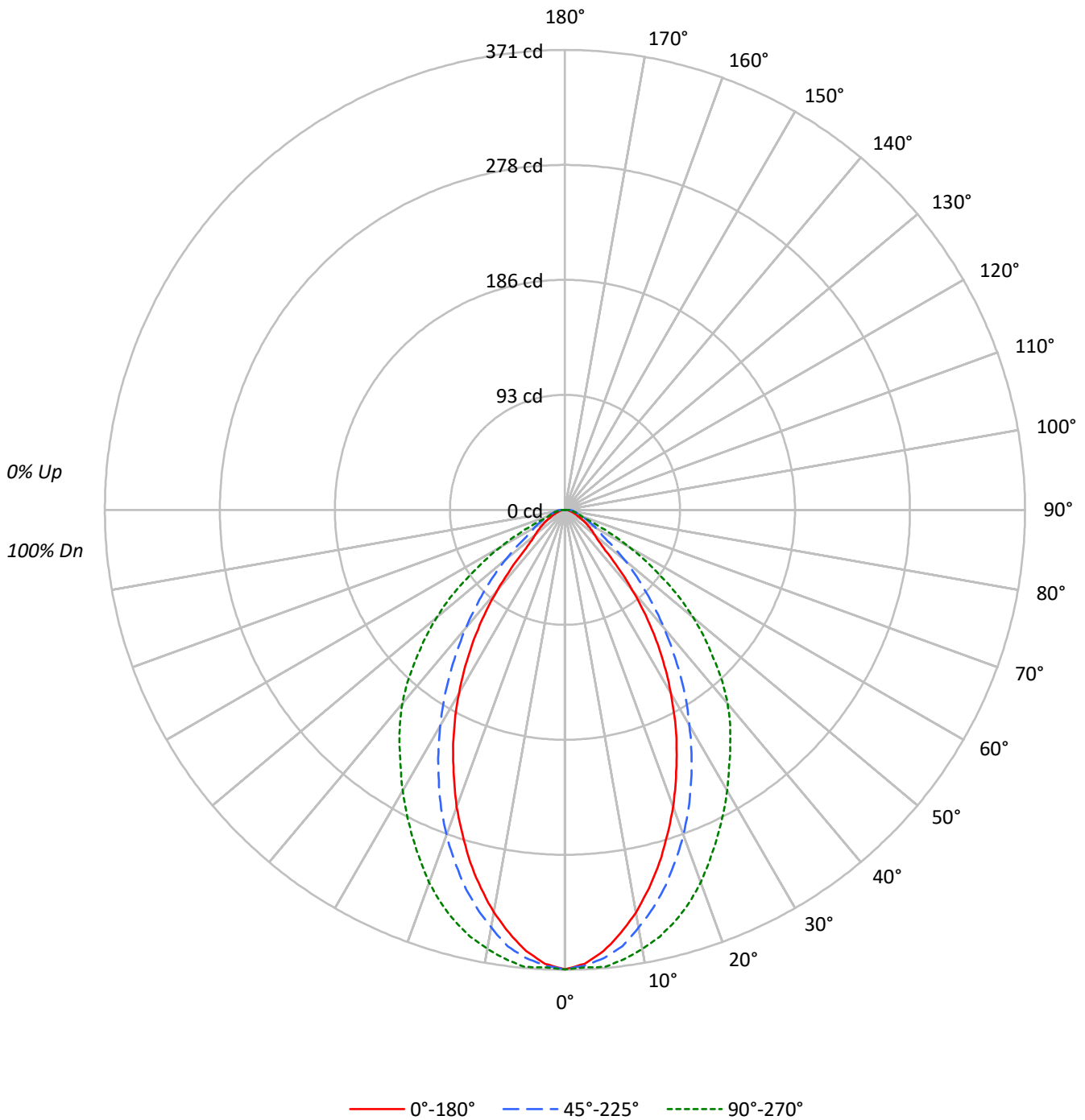
Lumens per Lamp: N/A
Luminaire Lumens: 497.6 lumens
Efficiency: N/A
Efficacy: 42.5 lumens/watt
Spacing Criteria (0/90/45): 0.82 / 1.08 / 0.98
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

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	111	108	105	102	109	106	103	100	102	99	97	98	96	94	94	93	91	89
2	104	98	92	88	102	96	91	87	92	88	85	89	86	83	86	84	81	79
3	97	89	82	77	95	87	81	77	84	79	75	82	78	74	79	76	73	71
4	90	81	74	68	88	80	73	68	77	72	67	75	70	66	73	69	66	64
5	85	74	67	61	83	73	66	61	71	65	60	69	64	60	68	63	59	58
6	79	68	61	55	78	67	60	55	66	59	55	64	59	54	63	58	54	52
7	74	63	56	51	73	62	55	50	61	55	50	60	54	50	58	53	49	48
8	70	58	51	46	69	58	51	46	57	50	46	55	50	46	54	49	45	44
9	66	54	47	43	65	54	47	43	53	47	42	52	46	42	51	46	42	40
10	62	51	44	39	61	50	44	39	49	43	39	49	43	39	48	43	39	37

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4353	4353	4353
5°	4212	4278	4364
10°	3931	4079	4288
15°	3583	3812	4176
20°	3188	3488	3999
25°	2762	3120	3770
30°	2316	2723	3547
35°	1835	2317	3333
40°	1298	1905	3127
45°	764	1506	2815
50°	572	1144	2464
55°	481	774	1980
60°	390	660	1407
65°	308	564	742
70°	268	491	460
75°	250	458	440
80°	250	500	433
85°	310	741	552

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 2815 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	34.1	6.9
10°-20°	88.7	17.8
20°-30°	112.9	22.7
30°-40°	106.2	21.3
40°-50°	76.5	15.4
50°-60°	44.2	8.9
60°-70°	20.2	4.1
70°-80°	10.1	2.0
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°	235.7	47.4
0°-40°	341.9	68.7
0°-60°	462.6	93.0
0°-90°	497.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	497.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	371	371	371	371	371	
5°	357	363	363	366	370	33
15°	295	305	314	331	344	82
25°	213	224	241	268	291	98
35°	128	139	162	199	232	79
45°	46	58	91	136	170	39
55°	24	24	38	72	97	21
65°	11	16	20	23	27	11
75°	6	11	10	10	10	6
85°	2	5	6	5	4	2
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	370.7	370.7	370.7	370.7	370.7
2.5°	366.5	371.2	367.9	368.4	369.3
5°	357.3	363.3	362.9	366.5	370.2
7.5°	344.4	351.4	355.0	360.6	365.6
10°	329.7	337.5	342.1	352.3	359.6
12.5°	312.7	322.8	328.8	342.1	352.7
15°	294.7	305.3	313.6	331.1	343.5
17.5°	274.5	286.0	296.6	317.3	332.5
20°	255.1	266.2	279.1	301.6	320.0
22.5°	233.9	245.9	260.6	284.6	305.3
25°	213.2	224.3	240.8	267.5	291.0
27.5°	192.5	203.5	221.0	250.5	276.3
30°	170.8	182.4	200.8	233.5	261.6
32.5°	149.7	160.7	181.4	216.9	246.4
35°	128.0	139.1	161.6	198.9	232.5
37.5°	106.8	118.3	142.3	184.2	218.7
40°	84.7	97.2	124.3	169.0	204.0
42.5°	64.0	77.4	106.4	153.3	187.9
45°	46.0	57.6	90.7	136.3	169.5
47.5°	35.9	41.9	76.4	118.8	152.4
50°	31.3	32.2	62.6	102.7	134.9
52.5°	27.2	28.1	49.3	87.5	116.5
55°	23.5	24.4	37.8	71.8	96.7
57.5°	19.8	21.2	31.3	57.1	77.8
60°	16.6	18.4	28.1	43.7	59.9
62.5°	13.4	16.6	23.9	32.2	42.8
65°	11.1	15.7	20.3	22.6	26.7
67.5°	9.2	14.3	17.0	16.1	15.7
70°	7.8	12.9	14.3	12.9	13.4
72.5°	6.4	12.0	12.0	11.1	11.1
75°	5.5	10.6	10.1	9.7	9.7
77.5°	4.6	9.2	8.7	8.3	7.8
80°	3.7	7.4	7.4	6.9	6.4
82.5°	3.2	6.0	6.0	6.0	5.1
85°	2.3	5.1	5.5	5.1	4.1
87.5°	1.8	4.6	4.6	4.1	2.8
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	5.08	6.40	5.45	6.72	7.03	12.44	13.76	12.81	14.07	14.39
	3H	6.47	7.64	6.85	7.97	8.34	12.67	13.84	13.05	14.17	14.54
	4H	7.02	8.11	7.42	8.46	8.85	12.79	13.88	13.19	14.23	14.61
	6H	7.46	8.46	7.87	8.83	9.22	12.90	13.91	13.32	14.28	14.67
	8H	7.63	8.58	8.06	8.97	9.38	12.96	13.90	13.39	14.30	14.70
	12H	7.79	8.70	8.22	9.08	9.51	13.01	13.92	13.45	14.31	14.74
4H	2H	6.19	7.28	6.59	7.63	8.01	12.40	13.49	12.80	13.84	14.23
	3H	7.85	8.74	8.26	9.15	9.55	12.76	13.66	13.18	14.06	14.46
	4H	8.66	9.46	9.09	9.88	10.32	12.96	13.76	13.40	14.18	14.62
	6H	9.29	9.98	9.76	10.43	10.90	13.19	13.88	13.65	14.32	14.79
	8H	9.53	10.17	10.00	10.62	11.09	13.29	13.94	13.76	14.38	14.86
	12H	9.74	10.31	10.23	10.80	11.27	13.42	13.99	13.91	14.47	14.95
8H	4H	9.10	9.74	9.57	10.19	10.66	13.00	13.64	13.47	14.09	14.56
	6H	10.01	10.54	10.51	11.04	11.52	13.33	13.86	13.83	14.35	14.83
	8H	10.43	10.91	10.95	11.42	11.91	13.52	13.99	14.04	14.51	15.00
	12H	10.85	11.27	11.36	11.77	12.34	13.77	14.19	14.28	14.68	15.25
12H	4H	9.15	9.73	9.64	10.21	10.68	12.99	13.56	13.47	14.04	14.52
	6H	10.15	10.62	10.67	11.14	11.63	13.34	13.82	13.86	14.33	14.83
	8H	10.68	11.11	11.20	11.60	12.17	13.60	14.02	14.11	14.52	15.09