

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



Scaled data based on original data using
LM-79-2024 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P1059199

Luminaire Tested: S123RDRP-S340D850-X4F0-XX-UDD-WVL-B

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2024
Report Number: P1059199
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2406-143-28)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123RDRP-S340D850-X4F0-XX-UDD-WVL-B
Description: DEFINE 3 BLACK REGRESSED DIRECT RECESSED HOUSING WITH WHITE STRAIGHT BLADE
LOUVER WITH DIFFUSER
CORE LIGHT ENGINE
Light Source: 5000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

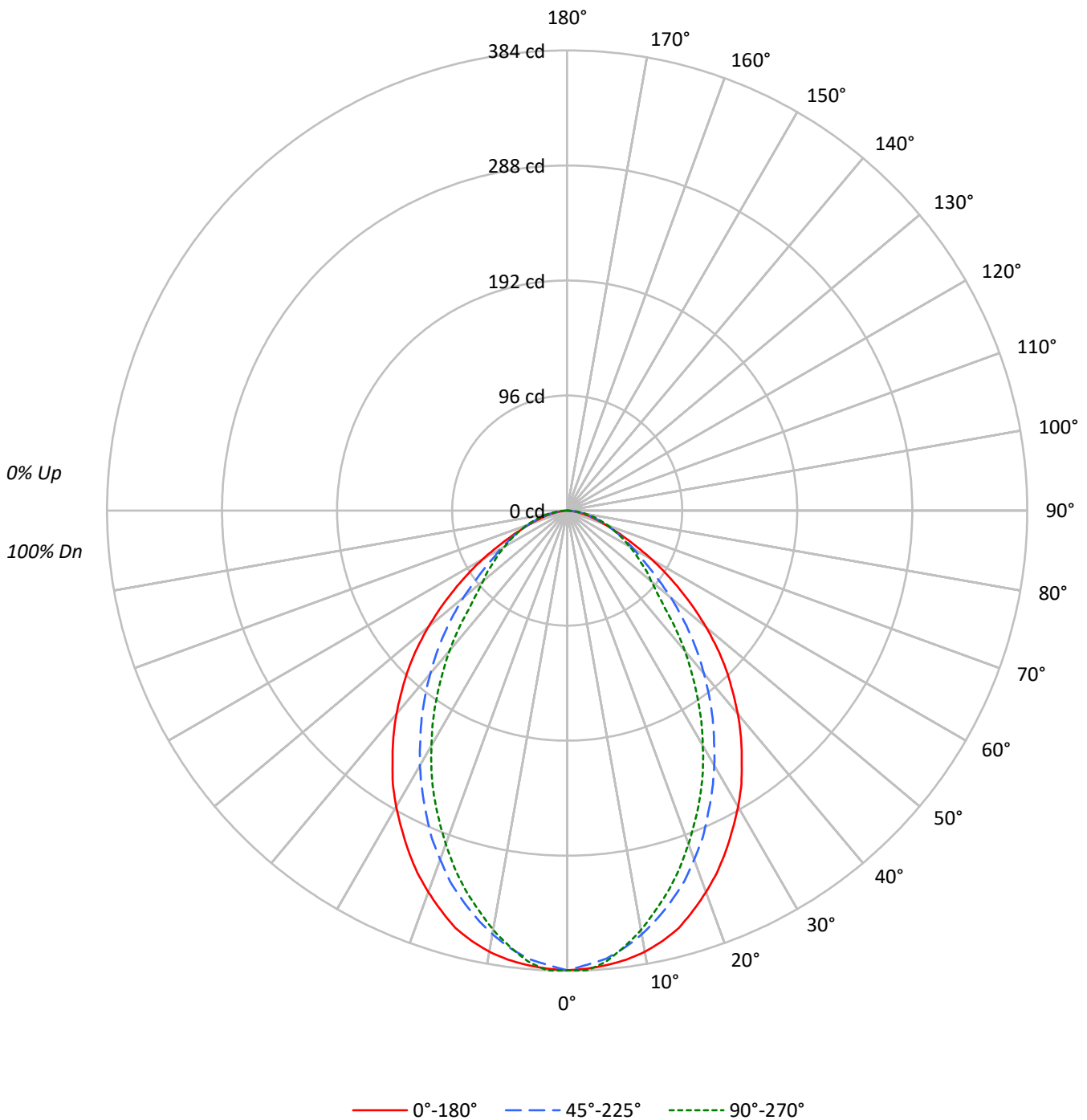
Lumens per Lamp: N/A
Luminaire Lumens: 670.9 lumens
Efficiency: N/A
Efficacy: 53.7 lumens/watt
Spacing Criteria (0/90/45): 1.12 / 0.95 / 1.09
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 12.5
Input Voltage (V): 120
Input Current (A_{in}): 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	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	107	103	100	108	104	101	98	100	98	95	96	94	92	93	91	89	88																			88									
2	102	95	89	84	100	93	88	83	90	85	81	87	83	80	84	81	78	76																			76									
3	94	85	78	73	92	84	77	72	81	75	71	78	73	69	76	72	68	66																			66									
4	87	77	69	63	85	76	68	63	73	67	62	71	66	61	69	64	60	58																			58									
5	81	70	62	56	79	69	61	56	67	60	55	65	59	54	63	58	54	52																			52									
6	76	64	56	50	74	63	55	50	61	54	49	59	53	49	58	53	48	47																			47									
7	71	58	50	45	69	58	50	45	56	49	44	55	49	44	53	48	44	42																			42									
8	66	54	46	41	65	53	46	41	52	45	40	51	45	40	50	44	40	38																			38									
9	62	50	42	37	61	49	42	37	48	41	37	47	41	37	46	41	37	35																			35									
10	58	46	39	34	57	46	39	34	45	38	34	44	38	34	43	38	34	32																			32									

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4504	4504	4504
5°	4489	4424	4451
10°	4458	4282	4238
15°	4382	4097	3985
20°	4234	3871	3699
25°	4062	3608	3405
30°	3870	3331	3070
35°	3641	3033	2716
40°	3398	2721	2339
45°	3115	2405	1921
50°	2762	2062	1668
55°	2350	1728	1529
60°	1916	1505	1418
65°	1461	1331	1320
70°	1140	1188	1236
75°	921	1066	1152
80°	683	872	1062
85°	377	552	930

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3115 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	35.6	5.3
10°-20°	95.8	14.3
20°-30°	130.2	19.4
30°-40°	135.0	20.1
40°-50°	113.9	17.0
50°-60°	80.8	12.0
60°-70°	49.4	7.4
70°-80°	24.6	3.7
80°-90°	5.6	0.8
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°	261.6	39.0
0°-40°	396.6	59.1
0°-60°	591.3	88.1
0°-90°	670.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	670.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	384	384	384	384	384	
5°	381	381	375	378	378	36
15°	360	354	337	331	328	101
25°	314	300	278	268	263	144
35°	254	235	212	197	190	159
45°	188	168	145	125	116	144
55°	115	103	84	77	75	103
65°	53	51	48	48	48	54
75°	20	22	24	24	25	22
85°	3	3	4	6	7	4
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	383.6	383.6	383.6	383.6	383.6
2.5°	382.6	383.1	379.4	383.6	384.0
5°	380.8	380.8	375.3	377.6	377.6
7.5°	378.0	377.1	367.9	367.9	367.0
10°	373.9	371.1	359.1	356.8	355.4
12.5°	367.9	363.3	348.5	344.4	341.6
15°	360.5	353.6	337.0	331.0	327.8
17.5°	349.9	343.0	324.6	316.3	312.6
20°	338.8	328.7	309.8	301.5	296.0
22.5°	326.9	313.9	295.5	285.4	279.4
25°	313.5	299.7	278.5	268.3	262.8
27.5°	299.2	284.0	262.3	250.8	245.3
30°	285.4	267.8	245.7	232.8	226.4
32.5°	270.6	250.8	228.2	214.8	208.4
35°	254.0	234.7	211.6	196.9	189.5
37.5°	238.3	218.5	194.5	178.9	170.6
40°	221.7	201.9	177.5	161.4	152.6
42.5°	204.2	185.3	161.4	142.5	134.2
45°	187.6	167.8	144.8	124.9	115.7
47.5°	169.7	151.2	128.6	108.3	101.9
50°	151.2	134.2	112.9	94.5	91.3
52.5°	133.2	118.9	97.3	85.3	83.9
55°	114.8	102.8	84.4	77.0	74.7
57.5°	97.7	89.0	72.4	68.7	67.8
60°	81.6	74.2	64.1	61.8	60.4
62.5°	65.9	61.8	55.8	54.9	53.9
65°	52.6	50.7	47.9	47.9	47.5
67.5°	41.5	41.5	41.0	42.0	41.5
70°	33.2	33.7	34.6	35.5	36.0
72.5°	26.3	27.7	28.6	30.0	30.4
75°	20.3	21.7	23.5	24.4	25.4
77.5°	14.8	16.1	18.0	19.4	20.3
80°	10.1	11.1	12.9	14.8	15.7
82.5°	6.5	6.9	8.3	10.1	11.1
85°	2.8	3.2	4.1	6.0	6.9
87.5°	0.0	0.0	0.5	1.8	3.2
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	14.04	15.49	14.40	15.80	16.12	12.14	13.59	12.50	13.90	14.21
	3H	14.94	16.23	15.31	16.56	16.92	13.71	15.01	14.09	15.33	15.70
	4H	15.22	16.43	15.62	16.78	17.16	14.31	15.52	14.71	15.87	16.25
	6H	15.37	16.49	15.78	16.85	17.25	14.76	15.87	15.17	16.24	16.64
	8H	15.39	16.45	15.82	16.84	17.25	14.91	15.97	15.33	16.36	16.76
	12H	15.39	16.40	15.82	16.79	17.21	15.01	16.02	15.44	16.40	16.83
4H	2H	14.28	15.49	14.68	15.84	16.22	12.68	13.89	13.08	14.24	14.62
	3H	15.40	16.40	15.81	16.80	17.20	14.45	15.45	14.86	15.85	16.26
	4H	15.79	16.69	16.22	17.10	17.54	15.16	16.06	15.60	16.48	16.92
	6H	16.03	16.81	16.49	17.25	17.71	15.74	16.51	16.20	16.96	17.42
	8H	16.07	16.80	16.54	17.24	17.71	15.93	16.66	16.39	17.10	17.57
	12H	16.08	16.73	16.56	17.21	17.68	16.07	16.71	16.55	17.19	17.67
8H	4H	15.94	16.67	16.41	17.12	17.59	15.37	16.10	15.84	16.54	17.01
	6H	16.26	16.86	16.76	17.35	17.83	16.05	16.65	16.55	17.14	17.62
	8H	16.33	16.87	16.85	17.38	17.87	16.31	16.84	16.82	17.36	17.85
	12H	16.37	16.84	16.88	17.34	17.90	16.51	16.99	17.03	17.48	18.05
12H	4H	15.95	16.60	16.43	17.08	17.55	15.37	16.02	15.85	16.50	16.97
	6H	16.27	16.81	16.79	17.32	17.81	16.06	16.60	16.58	17.11	17.60
	8H	16.39	16.86	16.90	17.35	17.92	16.36	16.84	16.87	17.33	17.90