

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: P1059604

Luminaire Tested: S123RDR-H340D850-X4F0-XX-UDD-WVL-B

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059604
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: S123RDR-H340D850-X4F0-XX-UDD-WVL-B
Description: DEFINE 3 BLACK REGRESSED DIRECT RECESSED HOUSING WITH WHITE STRAIGHT BLADE LOUVER WITH DIFFUSER
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 5000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

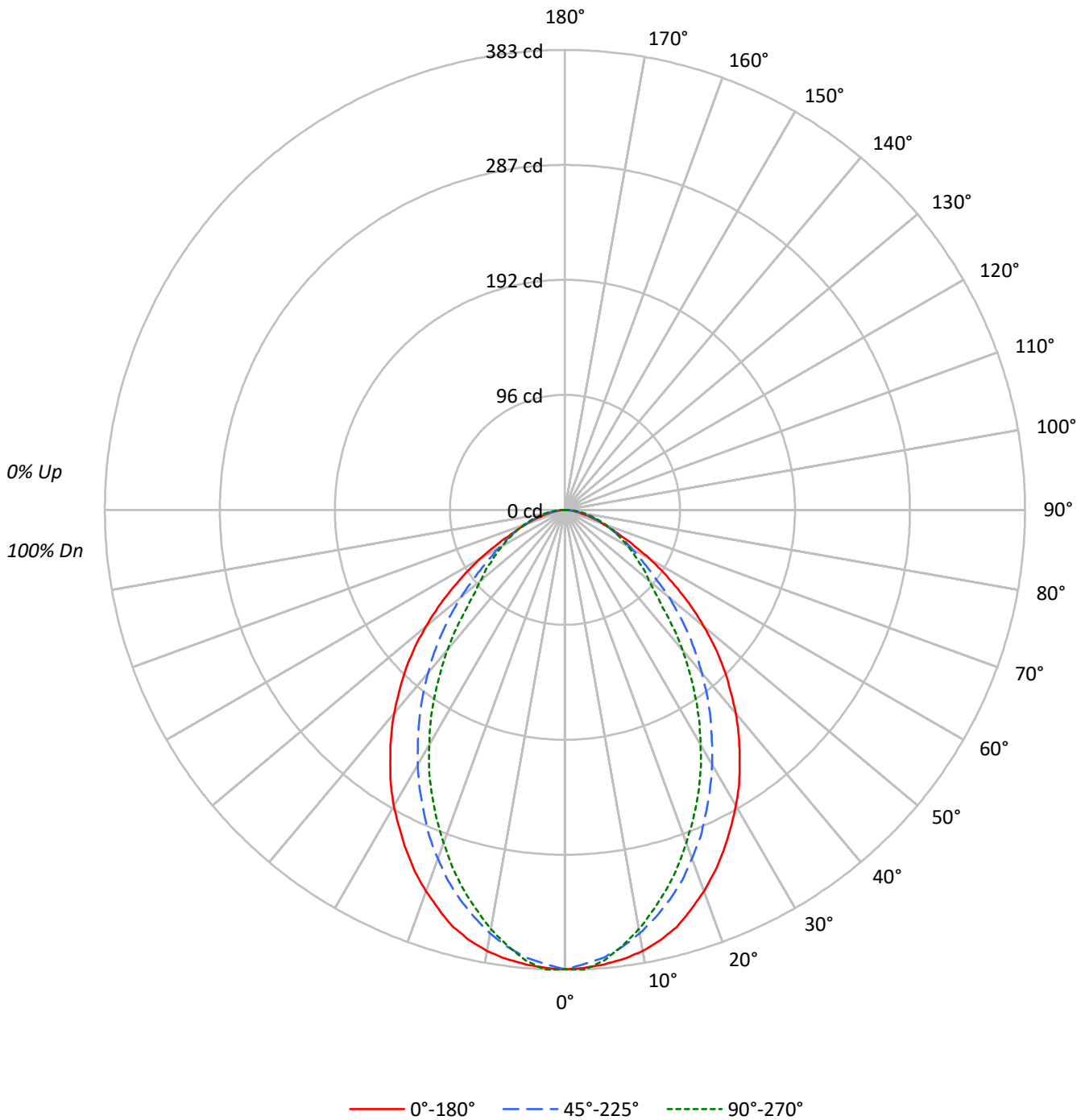
Lumens per Lamp: N/A
Luminaire Lumens: 669.2 lumens
Efficiency: N/A
Efficacy: 57.2 lumens/watt
Spacing Criteria (0/90/45): 1.12 / 0.95 / 1.09
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4493	4493	4493
5°	4478	4412	4439
10°	4447	4271	4228
15°	4372	4087	3975
20°	4224	3861	3689
25°	4051	3599	3396
30°	3860	3323	3062
35°	3632	3026	2709
40°	3391	2715	2333
45°	3109	2398	1916
50°	2755	2059	1664
55°	2344	1724	1525
60°	1912	1501	1414
65°	1456	1328	1317
70°	1136	1184	1233
75°	916	1066	1148
80°	683	872	1055
85°	377	552	930

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3109 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	35.5	5.3
10°-20°	95.6	14.3
20°-30°	129.9	19.4
30°-40°	134.7	20.1
40°-50°	113.6	17.0
50°-60°	80.6	12.0
60°-70°	49.3	7.4
70°-80°	24.5	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°	261.0	39.0
0°-40°	395.7	59.1
0°-60°	589.9	88.1
0°-90°	669.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	669.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	383	383	383	383	383	
5°	380	380	374	377	377	36
15°	360	353	336	330	327	101
25°	313	299	278	268	262	144
35°	253	234	211	196	189	158
45°	187	167	144	125	115	144
55°	114	103	84	77	74	103
65°	52	51	48	48	47	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°	382.6	382.6	382.6	382.6	382.6
2.5°	381.7	382.2	378.5	382.6	383.1
5°	379.9	379.9	374.3	376.6	376.6
7.5°	377.1	376.2	367.0	367.0	366.1
10°	373.0	370.2	358.2	355.9	354.6
12.5°	367.0	362.4	347.7	343.5	340.8
15°	359.6	352.7	336.2	330.2	327.0
17.5°	349.0	342.2	323.8	315.5	311.8
20°	338.0	327.9	309.0	300.8	295.2
22.5°	326.1	313.2	294.8	284.7	278.7
25°	312.7	298.9	277.8	267.7	262.1
27.5°	298.5	283.3	261.7	250.2	244.7
30°	284.7	267.2	245.1	232.2	225.8
32.5°	269.9	250.2	227.6	214.3	207.9
35°	253.4	234.1	211.1	196.4	189.0
37.5°	237.8	218.0	194.1	178.4	170.2
40°	221.2	201.4	177.1	161.0	152.2
42.5°	203.7	184.9	161.0	142.1	133.8
45°	187.2	167.4	144.4	124.6	115.4
47.5°	169.2	150.8	128.3	108.1	101.6
50°	150.8	133.8	112.7	94.3	91.1
52.5°	132.9	118.6	97.0	85.1	83.7
55°	114.5	102.6	84.2	76.8	74.5
57.5°	97.5	88.8	72.2	68.5	67.6
60°	81.4	74.0	63.9	61.6	60.2
62.5°	65.8	61.6	55.6	54.7	53.8
65°	52.4	50.6	47.8	47.8	47.4
67.5°	41.4	41.4	40.9	41.8	41.4
70°	33.1	33.6	34.5	35.4	35.9
72.5°	26.2	27.6	28.5	29.9	30.4
75°	20.2	21.6	23.5	24.4	25.3
77.5°	14.7	16.1	17.9	19.3	20.2
80°	10.1	11.0	12.9	14.7	15.6
82.5°	6.4	6.9	8.3	10.1	11.0
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	14.03	15.48	14.40	15.80	16.11	12.12	13.57	12.49	13.89	14.20
	3H	14.93	16.22	15.31	16.55	16.92	13.70	14.99	14.08	15.32	15.68
	4H	15.21	16.42	15.61	16.77	17.15	14.29	15.51	14.69	15.86	16.24
	6H	15.36	16.48	15.77	16.84	17.24	14.74	15.86	15.16	16.23	16.62
	8H	15.38	16.44	15.81	16.83	17.24	14.89	15.95	15.32	16.34	16.75
	12H	15.38	16.39	15.81	16.77	17.20	14.99	16.01	15.42	16.39	16.82
4H	2H	14.27	15.49	14.68	15.84	16.22	12.66	13.88	13.07	14.23	14.61
	3H	15.39	16.39	15.80	16.79	17.19	14.44	15.44	14.85	15.84	16.24
	4H	15.78	16.68	16.21	17.09	17.53	15.15	16.05	15.59	16.47	16.91
	6H	16.02	16.80	16.48	17.24	17.70	15.72	16.50	16.18	16.95	17.41
	8H	16.06	16.79	16.53	17.23	17.70	15.91	16.64	16.38	17.09	17.55
	12H	16.07	16.72	16.55	17.20	17.67	16.05	16.70	16.54	17.18	17.65
8H	4H	15.94	16.66	16.40	17.11	17.58	15.36	16.09	15.83	16.53	17.00
	6H	16.25	16.85	16.75	17.34	17.82	16.04	16.63	16.54	17.13	17.61
	8H	16.32	16.86	16.84	17.37	17.86	16.29	16.83	16.81	17.34	17.83
	12H	16.36	16.83	16.87	17.32	17.89	16.50	16.98	17.01	17.47	18.04
12H	4H	15.94	16.59	16.42	17.07	17.54	15.36	16.01	15.84	16.49	16.96
	6H	16.26	16.80	16.78	17.31	17.80	16.05	16.58	16.56	17.09	17.58
	8H	16.38	16.85	16.89	17.34	17.91	16.35	16.82	16.86	17.31	17.88