

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: P1056450

Luminaire Tested: S125R3DR-S610D850-X4F0-XX-UDD-F-W

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1056450
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-10)
Test Lab: INNOVATION CENTER
Issue Date: 7/25/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S125R3DR-S610D850-X4F0-XX-UDD-F-W
Description: DEFINE 5, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 5000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

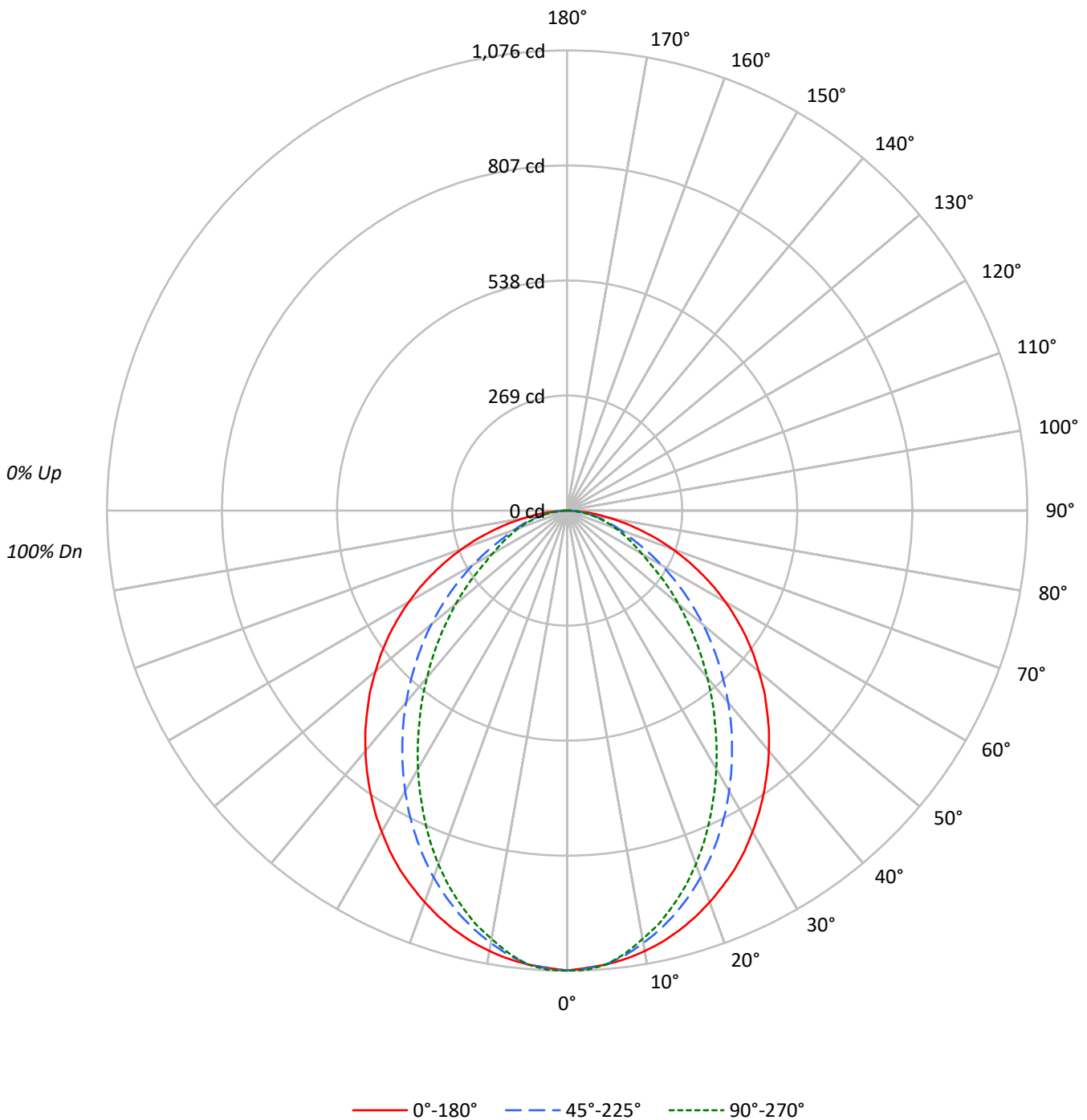
Lumens per Lamp: N/A
Luminaire Lumens: 2279.6 lumens
Efficiency: N/A
Efficacy: 119.4 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.01 / 1.17
Luminous Opening: Rectangular (W 0.39' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 19.1
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

TEST NUMBER: P1056450

CATALOG NUMBER: S125R3DR-S610D850-X4F0-XX-UDD-F-W

Luminous Intensity Polar Plot





TEST NUMBER: P1056450

CATALOG NUMBER: S125R3DR-S610D850-X4F0-XX-UDD-F-W

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	110	105	101	98	107	103	100	96	99	96	93	95	93	90	91	90	88	86
2	101	93	87	81	98	91	85	80	88	83	79	84	80	77	81	78	75	73
3	92	83	75	69	90	81	74	68	78	72	67	75	70	66	73	69	65	63
4	85	74	66	59	83	73	65	59	70	63	58	68	62	57	66	61	57	55
5	79	67	58	52	77	66	58	52	63	56	51	62	55	51	60	54	50	48
6	73	60	52	46	71	59	51	46	58	51	45	56	50	45	55	49	45	43
7	68	55	47	41	66	54	46	41	53	46	41	51	45	40	50	44	40	38
8	63	51	42	37	62	50	42	37	49	42	37	47	41	36	46	40	36	34
9	59	47	39	33	58	46	39	33	45	38	33	44	38	33	43	37	33	31
10	56	43	36	31	55	43	35	30	42	35	30	41	35	30	40	34	30	28

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7604	7604	7604
5°	7558	7553	7558
10°	7508	7370	7301
15°	7432	7145	6998
20°	7332	6869	6621
25°	7221	6540	6171
30°	7080	6184	5694
35°	6926	5799	5197
40°	6770	5402	4707
45°	6605	4988	4220
50°	6429	4562	3735
55°	6267	4097	3248
60°	6047	3601	2853
65°	5748	3054	2653
70°	5397	2730	2482
75°	4878	2516	2341
80°	4238	2284	2186
85°	3309	2012	2012

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6605 cd/sqm



TEST NUMBER: P1056450

CATALOG NUMBER: S125R3DR-S610D850-X4F0-XX-UDD-F-W

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	100.6	4.4
10°-20°	276.3	12.1
20°-30°	390.3	17.1
30°-40°	429.7	18.8
40°-50°	400.8	17.6
50°-60°	320.0	14.0
60°-70°	215.3	9.4
70°-80°	114.7	5.0
80°-90°	31.9	1.4
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°	767.3	33.7
0°-40°	1197.0	52.5
0°-60°	1917.7	84.1
0°-90°	2279.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2279.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1076	1076	1076	1076	1076	
5°	1065	1074	1064	1061	1065	101
15°	1016	1010	976	959	956	286
25°	926	898	838	802	791	426
35°	802	755	672	619	602	502
45°	661	598	499	438	422	510
55°	508	432	332	280	264	454
65°	344	268	183	162	159	341
75°	179	118	92	86	86	190
85°	41	28	25	26	25	49
90°	0	0	0	0	0	



TEST NUMBER: P1056450

CATALOG NUMBER: S125R3DR-S610D850-X4F0-XX-UDD-F-W

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1075.6	1075.6	1075.6	1075.6	1075.6
2.5°	1069.9	1078.8	1071.5	1073.1	1074.8
5°	1065.1	1073.9	1064.3	1061.1	1065.1
7.5°	1057.1	1064.3	1048.3	1041.1	1044.3
10°	1045.9	1050.7	1026.7	1017.1	1017.1
12.5°	1032.3	1032.3	1003.5	989.9	989.9
15°	1015.5	1009.9	976.2	959.4	956.2
17.5°	996.3	985.9	945.8	924.2	920.2
20°	974.6	957.8	913.0	884.9	880.1
22.5°	950.6	929.0	876.9	842.5	836.9
25°	925.8	897.8	838.5	801.7	791.2
27.5°	897.8	864.1	799.3	757.6	744.8
30°	867.3	828.9	757.6	711.2	697.5
32.5°	836.1	792.8	715.2	665.5	650.3
35°	802.5	755.2	671.9	619.1	602.2
37.5°	768.8	717.6	629.5	574.2	556.6
40°	733.6	677.5	585.4	528.6	510.1
42.5°	698.3	638.3	542.2	484.5	465.3
45°	660.7	598.2	498.9	438.1	422.1
47.5°	624.7	557.4	456.5	397.2	379.6
50°	584.6	515.0	414.8	355.6	339.6
52.5°	547.8	473.3	373.2	317.9	301.1
55°	508.5	431.7	332.4	279.5	263.5
57.5°	467.7	390.0	293.1	243.5	228.2
60°	427.7	348.4	254.7	209.0	201.8
62.5°	386.8	309.1	218.6	183.4	178.6
65°	343.6	268.3	182.6	161.8	158.6
67.5°	302.7	229.0	153.8	141.8	138.5
70°	261.1	189.8	132.1	121.7	120.1
72.5°	220.2	152.2	111.3	104.1	102.5
75°	178.6	118.5	92.1	86.5	85.7
77.5°	140.1	88.9	72.9	70.5	68.9
80°	104.1	66.5	56.1	54.5	53.7
82.5°	71.3	45.6	40.0	40.0	38.4
85°	40.8	28.0	24.8	25.6	24.8
87.5°	15.2	12.0	11.2	12.0	12.0
90°	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P1056450
 CATALOG NUMBER: S125R3DR-S610D850-X4F0-XX-UDD-F-W

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	18.34	19.88	18.70	20.19	20.50	14.72	16.26	15.08	16.57	16.89
	3H	20.12	21.51	20.50	21.83	22.19	16.19	17.58	16.57	17.91	18.27
	4H	20.77	22.07	21.17	22.42	22.80	16.79	18.08	17.18	18.43	18.81
	6H	21.25	22.45	21.66	22.82	23.21	17.25	18.45	17.66	18.82	19.21
	8H	21.41	22.55	21.83	22.94	23.34	17.41	18.55	17.83	18.94	19.34
	12H	21.50	22.60	21.93	22.98	23.41	17.52	18.62	17.95	19.00	19.43
4H	2H	18.47	19.77	18.87	20.12	20.50	15.40	16.69	15.80	17.04	17.42
	3H	20.44	21.52	20.85	21.92	22.32	17.07	18.15	17.48	18.55	18.95
	4H	21.19	22.16	21.62	22.57	23.01	17.78	18.75	18.21	19.16	19.60
	6H	21.78	22.63	22.24	23.07	23.53	18.36	19.21	18.82	19.65	20.11
	8H	21.99	22.78	22.45	23.22	23.69	18.57	19.36	19.03	19.81	20.27
	12H	22.13	22.84	22.62	23.32	23.79	18.73	19.44	19.21	19.92	20.39
8H	4H	21.25	22.04	21.71	22.49	22.95	18.14	18.93	18.60	19.38	19.84
	6H	21.91	22.57	22.40	23.06	23.53	18.84	19.50	19.34	19.99	20.47
	8H	22.16	22.75	22.68	23.26	23.75	19.13	19.72	19.64	20.22	20.71
	12H	22.37	22.89	22.88	23.38	23.95	19.37	19.89	19.88	20.38	20.94
12H	4H	21.24	21.95	21.72	22.43	22.90	18.19	18.90	18.67	19.37	19.85
	6H	21.90	22.49	22.42	23.00	23.49	18.91	19.50	19.43	20.01	20.50
	8H	22.20	22.72	22.71	23.21	23.77	19.26	19.78	19.77	20.27	20.83