

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: P1056449

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

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1056449  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-12)  
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-S  
Description: DEFINE 5, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
CORE LIGHT ENGINE  
Light Source: 5000K CCT, 80 CRI LEDS  
Ballast/Driver: -

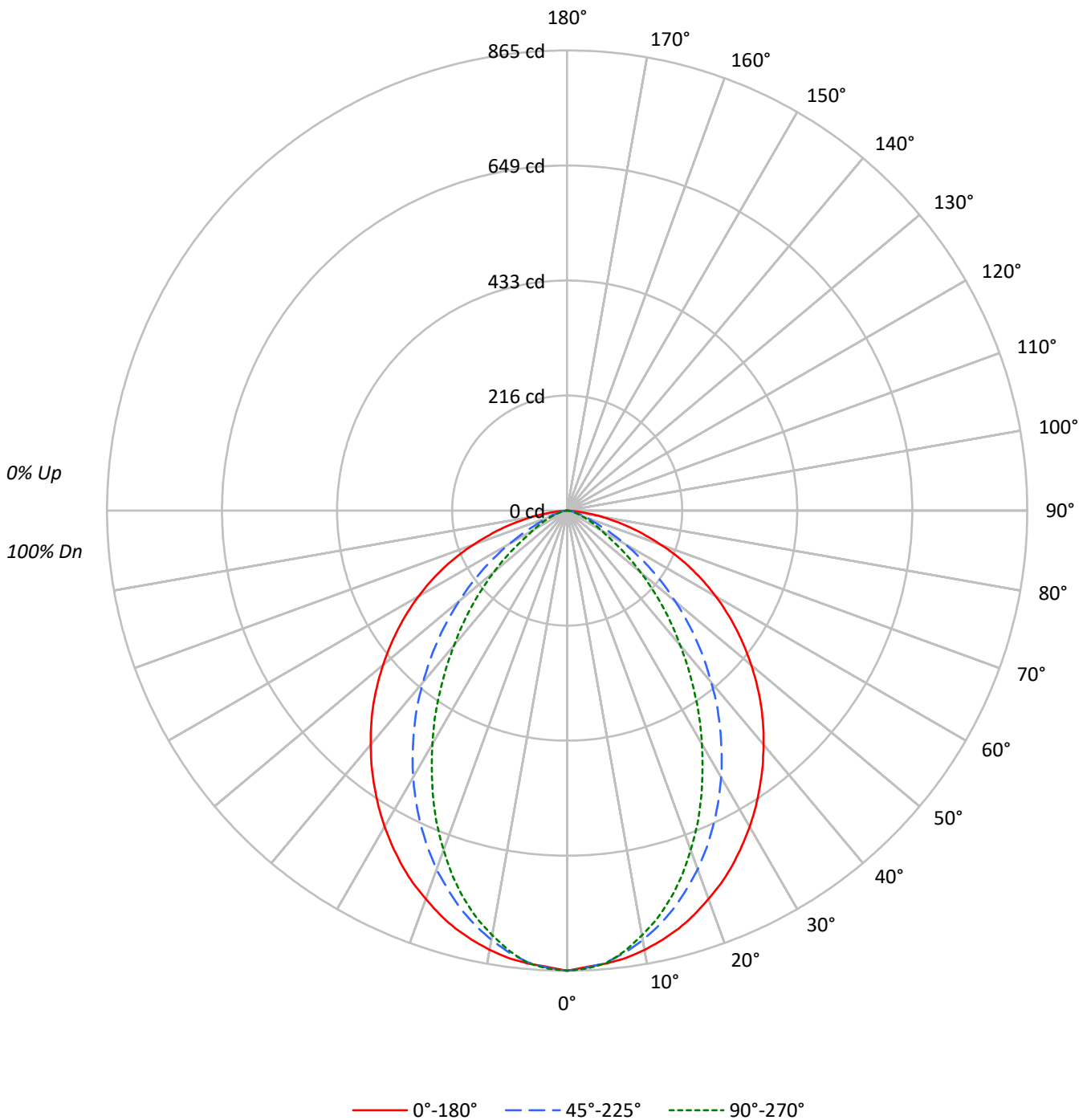
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1563.3 lumens  
Efficiency: N/A  
Efficacy: 81.8 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 0.95 / 1.11  
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 (A<sub>in</sub>): 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: P1056449

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

### Luminous Intensity Polar Plot





TEST NUMBER: P1056449

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

**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	105	102	99	101	98	96	97	95	93	93	92	90	88
2	102	96	90	85	100	94	89	84	90	86	82	87	84	80	84	81	79	77
3	95	86	79	73	92	84	78	73	81	76	71	79	74	70	76	72	69	67
4	88	77	70	64	86	76	69	63	74	67	62	71	66	62	69	65	61	59
5	81	70	62	56	79	69	61	56	67	60	55	65	59	55	63	58	54	52
6	76	64	56	50	74	63	55	50	61	54	49	60	54	49	58	53	49	47
7	71	58	50	45	69	58	50	45	56	49	44	55	49	44	54	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	36	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°	6114	6114	6114
5°	6064	6047	6058
10°	6019	5881	5818
15°	5949	5668	5515
20°	5844	5399	5109
25°	5735	5079	4647
30°	5602	4726	4138
35°	5453	4326	3600
40°	5299	3888	3045
45°	5149	3427	2522
50°	4968	2916	1982
55°	4777	2369	1441
60°	4563	1766	1031
65°	4287	1166	805
70°	3873	810	562
75°	3368	524	437
80°	2642	391	358
85°	1363	324	260

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 5149 cd/sqm



TEST NUMBER: P1056449

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

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	80.6	5.2
10°-20°	219.0	14.0
20°-30°	302.9	19.4
30°-40°	320.9	20.5
40°-50°	280.1	17.9
50°-60°	199.2	12.7
60°-70°	110.8	7.1
70°-80°	42.6	2.7
80°-90°	7.4	0.5
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°	602.4	38.5
0°-40°	923.3	59.1
0°-60°	1402.6	89.7
0°-90°	1563.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1563.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	865	865	865	865	865	
5°	854	861	852	850	854	81
15°	813	806	774	758	754	229
25°	735	710	651	611	596	338
35°	632	589	501	440	417	395
45°	515	453	343	274	252	397
55°	388	311	192	133	117	347
65°	256	168	70	51	48	253
75°	123	48	19	16	16	131
85°	17	5	4	3	3	25
90°	0	0	0	0	0	



TEST NUMBER: P1056449

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

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	864.9	864.9	864.9	864.9	864.9
2.5°	858.5	867.3	860.1	860.9	861.7
5°	854.5	860.9	852.1	849.7	853.7
7.5°	848.1	852.9	837.7	832.1	834.5
10°	838.5	840.1	819.3	811.3	810.5
12.5°	826.5	824.1	798.5	785.6	784.8
15°	812.9	805.7	774.4	757.6	753.6
17.5°	796.1	784.8	746.4	724.8	718.4
20°	776.8	761.6	717.6	689.5	679.1
22.5°	757.6	736.8	685.5	650.3	639.1
25°	735.2	710.4	651.1	611.1	595.8
27.5°	711.2	681.5	615.9	569.4	551.0
30°	686.3	651.9	579.0	527.0	506.9
32.5°	659.9	620.7	540.6	483.7	462.9
35°	631.9	588.6	501.3	440.5	417.2
37.5°	603.8	555.8	462.9	398.0	374.0
40°	574.2	522.2	421.3	354.8	330.0
42.5°	545.4	487.7	382.0	313.9	291.5
45°	515.0	453.3	342.8	273.9	252.3
47.5°	483.7	417.2	303.5	236.3	214.6
50°	451.7	382.0	265.1	199.4	180.2
52.5°	419.6	346.8	229.0	164.2	147.4
55°	387.6	310.7	192.2	132.9	116.9
57.5°	355.6	275.5	157.8	104.1	89.7
60°	322.7	239.5	124.9	76.9	72.9
62.5°	289.9	204.2	96.9	63.3	60.1
65°	256.3	168.2	69.7	51.3	48.1
67.5°	222.6	135.3	50.5	39.2	36.8
70°	187.4	103.3	39.2	29.6	27.2
72.5°	153.8	74.5	28.0	21.6	20.8
75°	123.3	48.1	19.2	16.0	16.0
77.5°	92.9	28.8	13.6	12.0	12.0
80°	64.9	16.8	9.6	8.8	8.8
82.5°	39.2	8.8	6.4	5.6	5.6
85°	16.8	4.8	4.0	3.2	3.2
87.5°	3.2	1.6	1.6	1.6	1.6
90°	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P1056449  
 CATALOG NUMBER: S125R3DR-S610D850-X4F0-XX-UDD-F-S

**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	17.45	18.90	17.82	19.21	19.53	10.09	11.53	10.45	11.85	12.16
	3H	19.01	20.30	19.39	20.63	20.99	10.65	11.94	11.03	12.27	12.63
	4H	19.53	20.74	19.93	21.08	21.47	10.78	11.98	11.18	12.33	12.71
	6H	19.87	20.98	20.28	21.35	21.74	10.84	11.95	11.25	12.32	12.71
	8H	19.95	21.00	20.38	21.39	21.80	10.85	11.90	11.27	12.29	12.69
	12H	19.98	20.98	20.41	21.36	21.79	10.84	11.84	11.27	12.22	12.65
4H	2H	17.35	18.55	17.75	18.90	19.28	10.66	11.86	11.06	12.21	12.59
	3H	19.02	20.00	19.43	20.40	20.81	11.33	12.31	11.74	12.72	13.12
	4H	19.56	20.45	20.00	20.87	21.31	11.48	12.37	11.92	12.78	13.22
	6H	19.96	20.72	20.42	21.17	21.63	11.59	12.36	12.05	12.80	13.27
	8H	20.06	20.77	20.53	21.22	21.69	11.61	12.32	12.07	12.76	13.23
	12H	20.11	20.74	20.59	21.22	21.70	11.61	12.24	12.09	12.72	13.19
8H	4H	19.47	20.18	19.93	20.63	21.10	11.75	12.47	12.22	12.91	13.38
	6H	19.85	20.44	20.35	20.93	21.41	11.89	12.47	12.39	12.96	13.44
	8H	19.96	20.49	20.48	21.00	21.49	11.91	12.44	12.43	12.95	13.44
	12H	20.03	20.49	20.54	20.98	21.55	11.94	12.40	12.45	12.89	13.46
12H	4H	19.43	20.06	19.92	20.55	21.02	11.77	12.40	12.25	12.88	13.35
	6H	19.80	20.33	20.32	20.84	21.33	11.90	12.42	12.42	12.94	13.43
	8H	19.93	20.39	20.44	20.89	21.45	11.96	12.42	12.47	12.91	13.48