

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: P1056583

Luminaire Tested: S125R3DR-H610D850-X4F0-XX-UDD-F-B

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1056583  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-11)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/25/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S125R3DR-H610D850-X4F0-XX-UDD-F-B  
Description: DEFINE 5, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 5000K CCT, 80 CRI LEDS  
Ballast/Driver: -

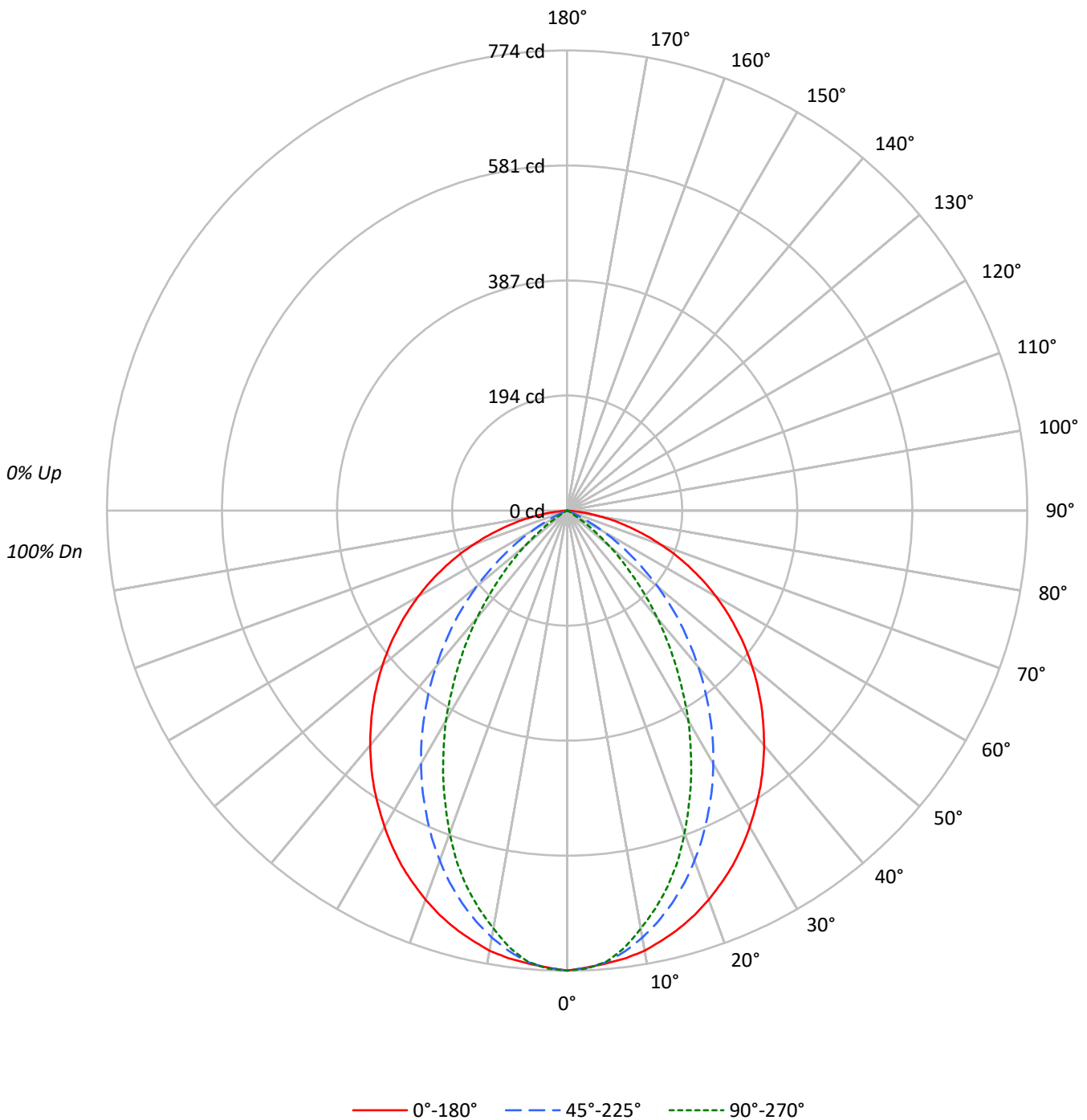
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1254.1 lumens  
Efficiency: N/A  
Efficacy: 72.5 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 0.89 / 1.07  
Luminous Opening: Rectangular (W 0.39' x L: 3.9' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 17.3  
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

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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	104	101	109	106	103	100	101	99	97	98	96	94	94	93	91	89
2	103	97	91	87	101	95	90	86	92	88	84	89	85	82	86	83	80	78
3	96	87	81	75	94	86	80	75	83	78	74	80	76	72	78	74	71	69
4	89	79	72	66	87	78	71	66	76	70	65	73	68	64	71	67	63	61
5	83	72	64	59	81	71	64	58	69	63	58	67	62	57	65	61	57	55
6	77	66	58	53	76	65	58	52	63	57	52	62	56	52	60	55	51	49
7	72	61	53	47	71	60	52	47	58	52	47	57	51	47	56	50	46	45
8	68	56	48	43	66	55	48	43	54	47	43	53	47	43	52	46	42	41
9	64	52	44	39	62	51	44	39	50	44	39	49	43	39	48	43	39	37
10	60	48	41	36	59	48	41	36	47	40	36	46	40	36	45	40	36	34

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	5470	5470	5470
5°	5425	5409	5404
10°	5395	5234	5125
15°	5326	5000	4787
20°	5238	4713	4344
25°	5138	4378	3852
30°	5014	4012	3330
35°	4891	3607	2753
40°	4755	3170	2180
45°	4615	2706	1580
50°	4461	2184	1021
55°	4290	1597	454
60°	4087	987	130
65°	3836	360	77
70°	3470	126	31
75°	3015	41	22
80°	2308	33	0
85°	1054	0	0

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 4615 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	71.9	5.7
10°-20°	193.0	15.4
20°-30°	261.1	20.8
30°-40°	268.2	21.4
40°-50°	222.2	17.7
50°-60°	142.6	11.4
60°-70°	68.9	5.5
70°-80°	23.3	1.9
80°-90°	3.0	0.2
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°	525.9	41.9
0°-40°	794.1	63.3
0°-60°	1158.9	92.4
0°-90°	1254.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1254.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	774	774	774	774	774	
5°	764	771	762	758	762	73
15°	728	718	683	660	654	205
25°	659	626	561	511	494	303
35°	567	512	418	345	319	354
45°	462	386	271	187	158	356
55°	348	255	130	57	37	311
65°	229	126	22	6	5	227
75°	110	24	2	1	1	117
85°	13	0	0	0	0	21
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	773.7	773.7	773.7	773.7	773.7
2.5°	769.1	775.3	769.9	769.1	770.7
5°	764.5	770.7	762.2	757.6	761.5
7.5°	759.2	762.2	747.6	740.0	741.5
10°	751.5	750.7	729.2	716.2	713.9
12.5°	740.0	736.1	707.8	689.4	685.5
15°	727.7	718.5	683.2	659.5	654.1
17.5°	713.1	698.6	656.4	625.7	618.1
20°	696.3	676.3	626.5	588.9	577.4
22.5°	677.9	652.6	595.1	550.6	535.2
25°	658.7	626.5	561.3	510.7	493.8
27.5°	637.2	599.7	527.6	470.1	449.4
30°	614.2	571.3	491.5	428.7	407.9
32.5°	590.5	542.9	455.5	387.2	361.9
35°	566.7	512.2	417.9	345.1	319.0
37.5°	541.4	481.6	381.1	305.2	276.8
40°	515.3	450.1	343.5	263.8	236.2
42.5°	488.5	417.9	306.0	224.7	196.3
45°	461.6	385.7	270.7	187.1	158.0
47.5°	434.0	352.7	233.9	150.3	125.0
50°	405.6	320.5	198.6	117.3	92.8
52.5°	377.3	287.6	162.6	85.1	62.9
55°	348.1	255.4	129.6	56.7	36.8
57.5°	319.0	222.4	98.9	31.4	13.8
60°	289.1	190.9	69.8	10.7	9.2
62.5°	260.0	157.2	43.7	8.4	6.9
65°	229.3	126.5	21.5	6.1	4.6
67.5°	199.4	97.4	9.2	3.8	2.3
70°	167.9	70.5	6.1	2.3	1.5
72.5°	138.8	45.2	3.8	1.5	0.8
75°	110.4	23.8	1.5	0.8	0.8
77.5°	82.8	10.0	0.8	0.8	0.8
80°	56.7	4.6	0.8	0.8	0.0
82.5°	33.7	1.5	0.8	0.8	0.0
85°	13.0	0.0	0.0	0.0	0.0
87.5°	0.8	0.0	0.0	0.0	0.0
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	16.97	18.36	17.34	18.67	18.99	1.83	3.21	2.19	3.53	3.84
	3H	18.52	19.75	18.90	20.08	20.44	1.75	2.98	2.13	3.31	3.67
	4H	19.04	20.19	19.45	20.54	20.92	1.68	2.83	2.09	3.18	3.56
	6H	19.38	20.44	19.80	20.80	21.20	1.62	2.67	2.03	3.04	3.43
	8H	19.46	20.46	19.89	20.85	21.26	1.57	2.57	2.00	2.96	3.37
	12H	19.48	20.43	19.91	20.82	21.25	1.53	2.49	1.97	2.87	3.30
4H	2H	16.78	17.92	17.18	18.27	18.65	2.70	3.84	3.10	4.19	4.57
	3H	18.39	19.32	18.80	19.73	20.13	2.64	3.58	3.06	3.98	4.38
	4H	18.91	19.75	19.35	20.16	20.61	2.57	3.40	3.00	3.82	4.26
	6H	19.29	20.01	19.75	20.45	20.92	2.50	3.22	2.96	3.67	4.13
	8H	19.38	20.06	19.85	20.50	20.97	2.45	3.12	2.92	3.57	4.04
	12H	19.42	20.01	19.91	20.50	20.97	2.41	3.00	2.90	3.49	3.96
8H	4H	18.78	19.45	19.25	19.90	20.37	3.59	4.26	4.06	4.71	5.18
	6H	19.14	19.69	19.64	20.18	20.66	3.51	4.06	4.01	4.55	5.03
	8H	19.23	19.73	19.75	20.24	20.73	3.46	3.95	3.98	4.46	4.95
	12H	19.28	19.71	19.79	20.21	20.78	3.42	3.85	3.93	4.34	4.91
12H	4H	18.74	19.33	19.23	19.82	20.29	3.67	4.26	4.15	4.74	5.22
	6H	19.08	19.57	19.60	20.09	20.58	3.57	4.06	4.09	4.58	5.07
	8H	19.19	19.63	19.71	20.12	20.69	3.54	3.98	4.05	4.47	5.04