

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: P1056601

Luminaire Tested: S125R3DR-H850D830-X4F0-XX-UDD-FLL-B

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1056601  
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-H850D830-X4F0-XX-UDD-FLL-B  
Description: DEFINE 5, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 3000K CCT, 80 CRI LEDS  
Ballast/Driver: -

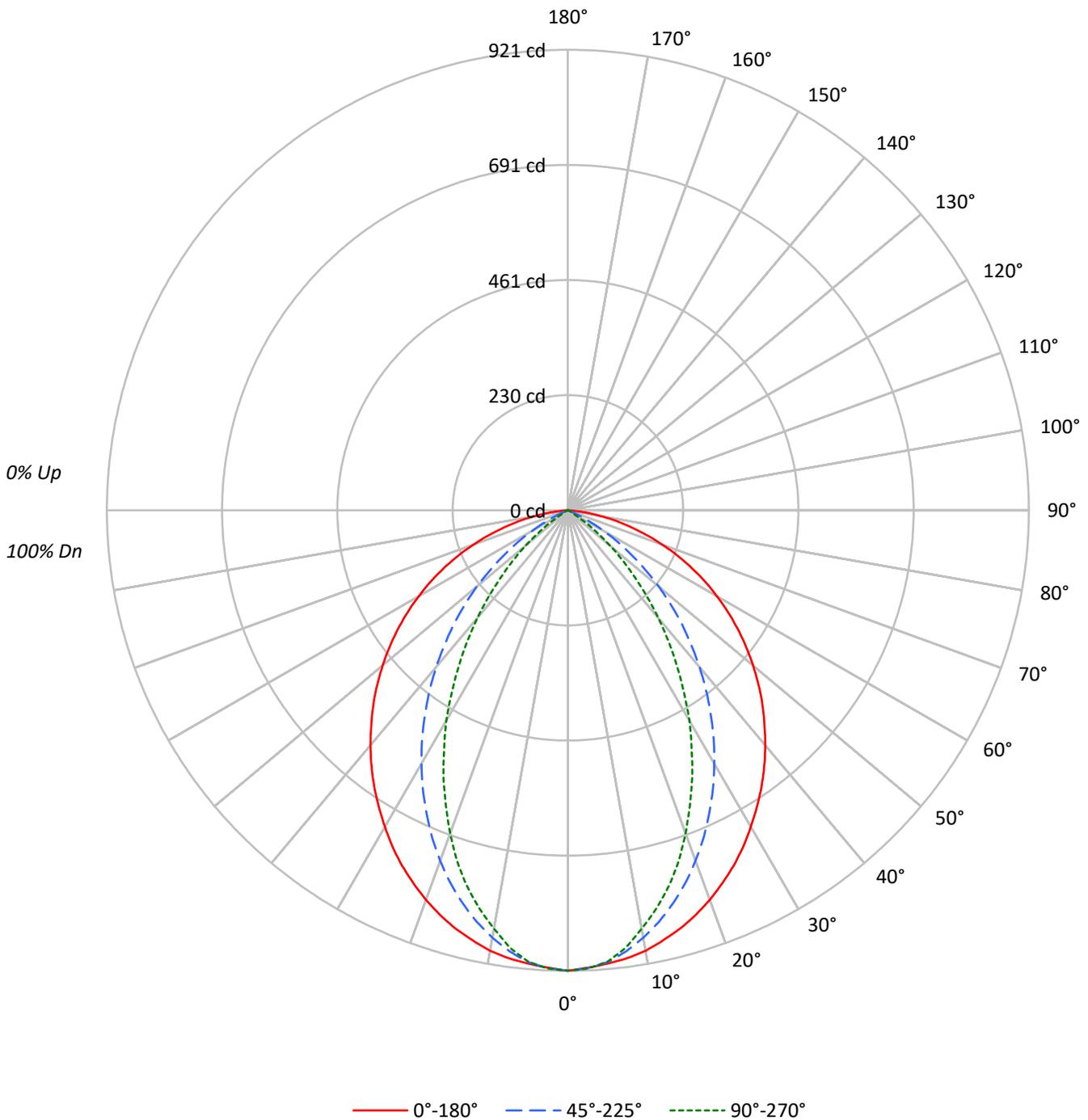
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1492.7 lumens  
Efficiency: N/A  
Efficacy: 62.7 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): 23.8  
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°	6510	6510	6510
5°	6458	6439	6431
10°	6421	6231	6100
15°	6339	5952	5698
20°	6235	5610	5171
25°	6115	5211	4585
30°	5968	4776	3964
35°	5821	4293	3277
40°	5661	3773	2594
45°	5494	3221	1880
50°	5310	2600	1214
55°	5107	1902	540
60°	4865	1175	156
65°	4565	428	92
70°	4132	151	37
75°	3589	49	25
80°	2748	37	0
85°	1257	0	0

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 5494 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	85.5	5.7
10°-20°	229.7	15.4
20°-30°	310.7	20.8
30°-40°	319.2	21.4
40°-50°	264.5	17.7
50°-60°	169.8	11.4
60°-70°	82.0	5.5
70°-80°	27.7	1.9
80°-90°	3.6	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°	626.0	41.9
0°-40°	945.2	63.3
0°-60°	1379.4	92.4
0°-90°	1492.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1492.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	921	921	921	921	921	
5°	910	917	907	902	906	86
15°	866	855	813	785	779	244
25°	784	746	668	608	588	361
35°	674	610	497	411	380	422
45°	550	459	322	223	188	424
55°	414	304	154	68	44	370
65°	273	151	26	7	6	270
75°	131	28	2	1	1	139
85°	16	0	0	0	0	25
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	920.9	920.9	920.9	920.9	920.9
2.5°	915.5	922.8	916.4	915.5	917.3
5°	910.0	917.3	907.3	901.8	906.3
7.5°	903.6	907.3	889.9	880.8	882.6
10°	894.5	893.6	868.0	852.5	849.8
12.5°	880.8	876.2	842.5	820.5	816.0
15°	866.2	855.2	813.2	784.9	778.6
17.5°	848.8	831.5	781.3	744.8	735.7
20°	828.8	805.0	745.7	701.0	687.3
22.5°	806.9	776.7	708.3	655.3	637.1
25°	784.0	745.7	668.1	607.9	587.8
27.5°	758.5	713.8	628.0	559.5	534.9
30°	731.1	680.0	585.1	510.2	485.6
32.5°	702.8	646.2	542.2	460.9	430.8
35°	674.5	609.7	497.4	410.7	379.7
37.5°	644.4	573.2	453.6	363.3	329.5
40°	613.4	535.8	408.9	314.0	281.1
42.5°	581.4	497.4	364.2	267.4	233.7
45°	549.5	459.1	322.2	222.7	188.0
47.5°	516.6	419.9	278.4	178.9	148.8
50°	482.8	381.5	236.4	139.6	110.4
52.5°	449.1	342.3	193.5	101.3	74.8
55°	414.4	303.9	154.3	67.5	43.8
57.5°	379.7	264.7	117.7	37.4	16.4
60°	344.1	227.3	83.1	12.8	11.0
62.5°	309.4	187.1	52.0	10.0	8.2
65°	272.9	150.6	25.6	7.3	5.5
67.5°	237.3	115.9	11.0	4.6	2.7
70°	199.9	84.0	7.3	2.7	1.8
72.5°	165.2	53.9	4.6	1.8	0.9
75°	131.4	28.3	1.8	0.9	0.9
77.5°	98.6	11.9	0.9	0.9	0.9
80°	67.5	5.5	0.9	0.9	0.0
82.5°	40.2	1.8	0.9	0.9	0.0
85°	15.5	0.0	0.0	0.0	0.0
87.5°	0.9	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	17.58	18.96	17.94	19.28	19.59	2.44	3.82	2.80	4.14	4.45
	3H	19.13	20.36	19.51	20.68	21.05	2.36	3.59	2.74	3.92	4.28
	4H	19.65	20.79	20.05	21.14	21.53	2.29	3.44	2.69	3.79	4.17
	6H	19.99	21.04	20.40	21.41	21.80	2.22	3.27	2.64	3.64	4.04
	8H	20.07	21.07	20.50	21.46	21.86	2.18	3.18	2.61	3.57	3.97
	12H	20.09	21.04	20.52	21.42	21.85	2.14	3.09	2.57	3.48	3.91
4H	2H	17.38	18.53	17.78	18.88	19.26	3.31	4.45	3.71	4.80	5.18
	3H	18.99	19.93	19.41	20.33	20.73	3.25	4.19	3.67	4.59	4.99
	4H	19.52	20.35	19.95	20.77	21.21	3.18	4.01	3.61	4.43	4.87
	6H	19.89	20.61	20.35	21.06	21.52	3.11	3.83	3.57	4.27	4.74
	8H	19.99	20.66	20.46	21.11	21.58	3.06	3.73	3.53	4.18	4.65
	12H	20.03	20.62	20.51	21.10	21.58	3.02	3.61	3.50	4.09	4.57
8H	4H	19.39	20.06	19.86	20.51	20.98	4.20	4.87	4.67	5.32	5.79
	6H	19.75	20.29	20.25	20.79	21.27	4.12	4.66	4.62	5.16	5.64
	8H	19.84	20.33	20.36	20.85	21.34	4.06	4.56	4.58	5.07	5.56
	12H	19.88	20.32	20.40	20.81	21.38	4.02	4.46	4.54	4.95	5.52
12H	4H	19.35	19.94	19.83	20.42	20.90	4.28	4.87	4.76	5.35	5.83
	6H	19.68	20.18	20.21	20.69	21.18	4.18	4.67	4.70	5.19	5.68
	8H	19.80	20.23	20.31	20.73	21.30	4.15	4.58	4.66	5.08	5.65