

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: P1056475

Luminaire Tested: S125R3DR-S850D850-X4F0-XX-UDD-F-B

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1056475  
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-S850D850-X4F0-XX-UDD-F-B  
Description: DEFINE 5, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
CORE LIGHT ENGINE  
Light Source: 5000K CCT, 80 CRI LEDS  
Ballast/Driver: -

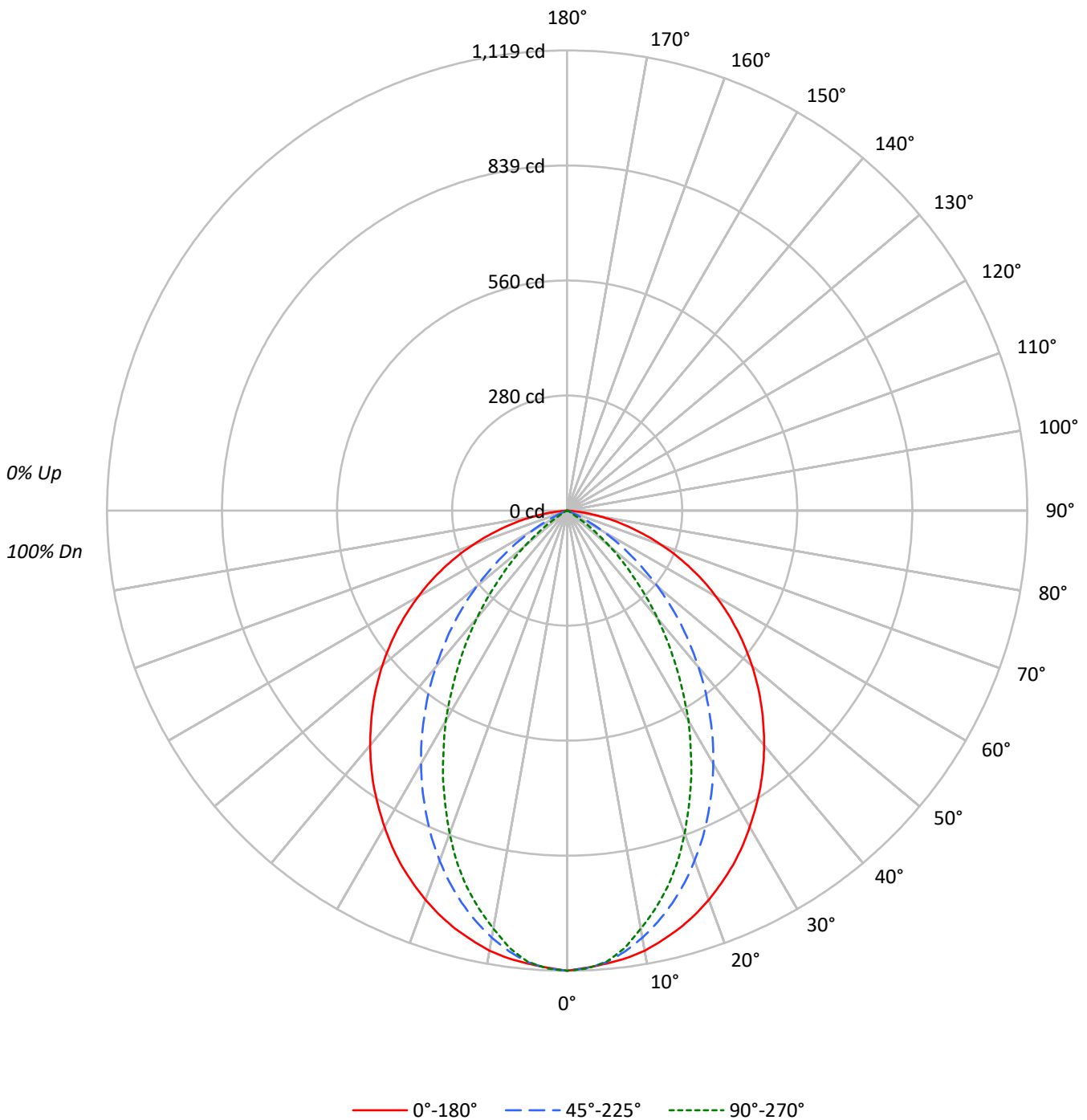
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1813.7 lumens  
Efficiency: N/A  
Efficacy: 68.7 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): 26.4  
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	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°	7911	7911	7911
5°	7846	7822	7814
10°	7801	7571	7412
15°	7702	7232	6924
20°	7576	6817	6282
25°	7430	6332	5571
30°	7251	5803	4816
35°	7073	5216	3981
40°	6877	4585	3152
45°	6674	3914	2284
50°	6452	3159	1476
55°	6206	2310	656
60°	5911	1427	188
65°	5547	520	112
70°	5021	184	45
75°	4362	60	30
80°	3342	45	0
85°	1533	0	0

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 6674 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	103.9	5.7
10°-20°	279.1	15.4
20°-30°	377.6	20.8
30°-40°	387.8	21.4
40°-50°	321.3	17.7
50°-60°	206.3	11.4
60°-70°	99.6	5.5
70°-80°	33.7	1.9
80°-90°	4.3	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°	760.6	41.9
0°-40°	1148.4	63.3
0°-60°	1676.0	92.4
0°-90°	1813.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1813.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1119	1119	1119	1119	1119	
5°	1106	1114	1102	1096	1101	105
15°	1052	1039	988	954	946	297
25°	953	906	812	739	714	438
35°	820	741	604	499	461	512
45°	668	558	392	271	228	515
55°	504	369	187	82	53	450
65°	332	183	31	9	7	328
75°	160	34	2	1	1	169
85°	19	0	0	0	0	30
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1119.0	1119.0	1119.0	1119.0	1119.0
2.5°	1112.3	1121.2	1113.4	1112.3	1114.5
5°	1105.7	1114.5	1102.3	1095.7	1101.2
7.5°	1097.9	1102.3	1081.3	1070.2	1072.4
10°	1086.8	1085.7	1054.7	1035.8	1032.5
12.5°	1070.2	1064.6	1023.6	997.0	991.4
15°	1052.4	1039.1	988.1	953.7	946.0
17.5°	1031.4	1010.3	949.3	904.9	893.9
20°	1007.0	978.1	906.1	851.7	835.1
22.5°	980.4	943.8	860.6	796.3	774.1
25°	952.6	906.1	811.8	738.6	714.2
27.5°	921.6	867.2	763.0	679.8	649.9
30°	888.3	826.2	710.9	619.9	590.0
32.5°	853.9	785.2	658.7	560.0	523.4
35°	819.6	740.8	604.4	499.1	461.3
37.5°	783.0	696.5	551.2	441.4	400.3
40°	745.2	651.0	496.8	381.5	341.6
42.5°	706.4	604.4	442.5	324.9	283.9
45°	667.6	557.8	391.5	270.6	228.5
47.5°	627.7	510.1	338.2	217.4	180.8
50°	586.7	463.6	287.2	169.7	134.2
52.5°	545.6	415.9	235.1	123.1	90.9
55°	503.5	369.3	187.4	82.1	53.2
57.5°	461.3	321.6	143.1	45.5	20.0
60°	418.1	276.1	100.9	15.5	13.3
62.5°	376.0	227.3	63.2	12.2	10.0
65°	331.6	183.0	31.1	8.9	6.7
67.5°	288.3	140.8	13.3	5.5	3.3
70°	242.9	102.0	8.9	3.3	2.2
72.5°	200.7	65.4	5.5	2.2	1.1
75°	159.7	34.4	2.2	1.1	1.1
77.5°	119.8	14.4	1.1	1.1	1.1
80°	82.1	6.7	1.1	1.1	0.0
82.5°	48.8	2.2	1.1	1.1	0.0
85°	18.9	0.0	0.0	0.0	0.0
87.5°	1.1	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	18.25	19.64	18.62	19.95	20.27	3.12	4.51	3.49	4.82	5.14
	3H	19.80	21.03	20.18	21.36	21.72	3.04	4.27	3.42	4.60	4.97
	4H	20.33	21.47	20.73	21.82	22.20	2.98	4.12	3.38	4.47	4.85
	6H	20.67	21.72	21.08	22.09	22.48	2.91	3.96	3.32	4.33	4.72
	8H	20.75	21.74	21.18	22.13	22.54	2.87	3.86	3.30	4.25	4.66
	12H	20.76	21.72	21.20	22.10	22.53	2.83	3.78	3.26	4.16	4.59
4H	2H	18.06	19.20	18.46	19.55	19.93	3.99	5.13	4.39	5.48	5.87
	3H	19.67	20.60	20.08	21.01	21.41	3.94	4.87	4.35	5.27	5.68
	4H	20.19	21.03	20.63	21.45	21.89	3.86	4.69	4.29	5.11	5.55
	6H	20.57	21.29	21.03	21.73	22.20	3.79	4.51	4.26	4.96	5.42
	8H	20.67	21.34	21.14	21.78	22.25	3.74	4.41	4.21	4.86	5.33
	12H	20.70	21.30	21.19	21.78	22.25	3.70	4.29	4.19	4.78	5.25
8H	4H	20.07	20.74	20.53	21.18	21.65	4.88	5.55	5.35	6.00	6.47
	6H	20.42	20.97	20.92	21.47	21.95	4.80	5.34	5.30	5.84	6.32
	8H	20.52	21.01	21.04	21.52	22.01	4.74	5.24	5.26	5.75	6.24
	12H	20.56	20.99	21.07	21.49	22.06	4.70	5.14	5.22	5.63	6.20
12H	4H	20.02	20.62	20.51	21.10	21.57	4.96	5.55	5.44	6.03	6.51
	6H	20.36	20.85	20.88	21.37	21.86	4.86	5.35	5.38	5.87	6.36
	8H	20.47	20.91	20.99	21.40	21.97	4.83	5.26	5.34	5.76	6.33