

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: P1056476

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

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1056476  
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-S850D850-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: -

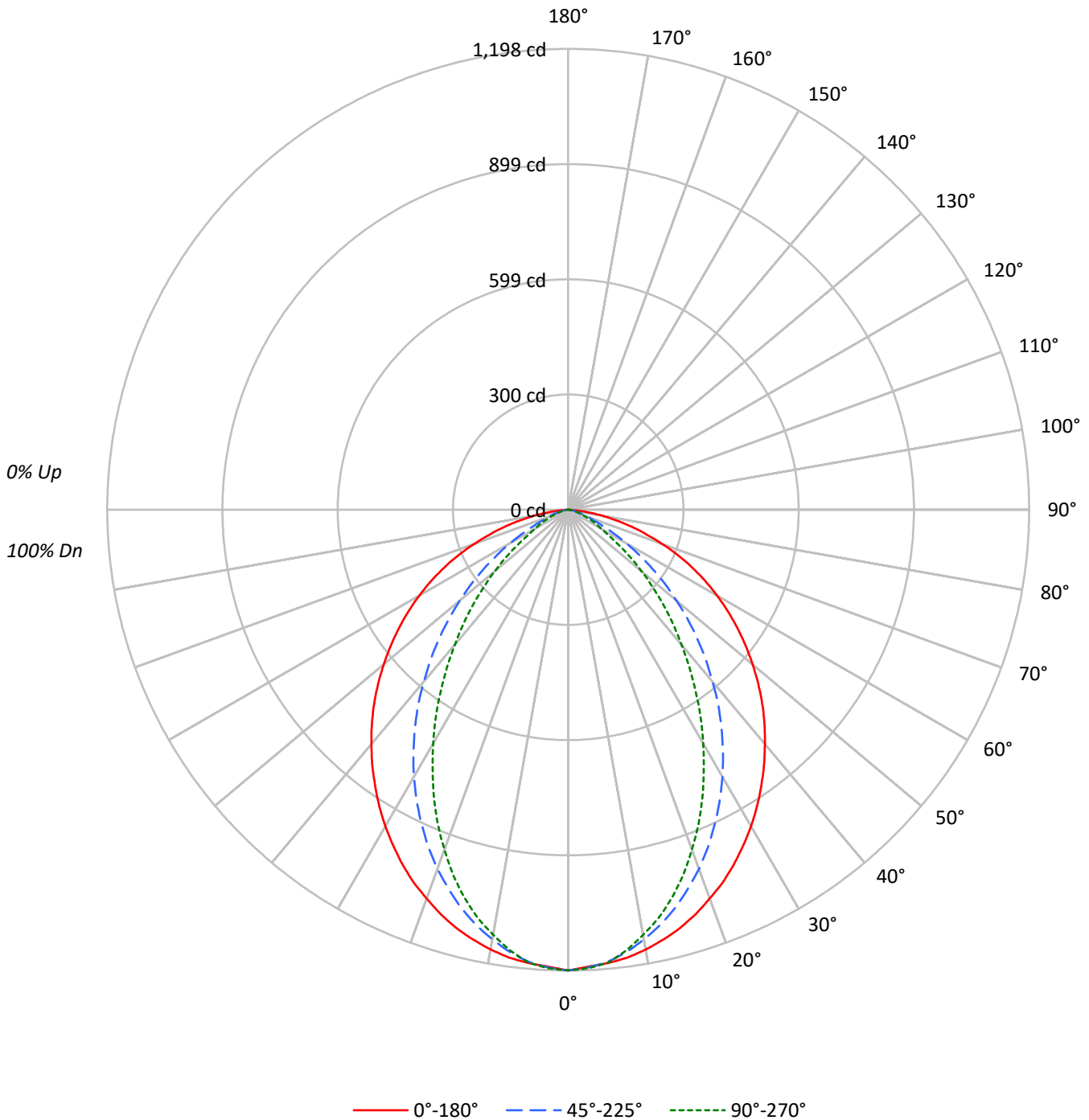
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2164.8 lumens  
Efficiency: N/A  
Efficacy: 82.0 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): 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	0		
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100					100			
1	111	107	103	100	108	105	102	99	101	98	96	97	95	93	93	92	90	88					88			
2	102	96	90	85	100	94	89	84	90	86	82	87	84	80	84	81	79	77					77			
3	95	86	79	73	92	84	78	73	81	76	71	79	74	70	76	72	69	67					67			
4	88	77	70	64	86	76	69	63	74	67	62	71	66	62	69	65	61	59					59			
5	81	70	62	56	79	69	61	56	67	60	55	65	59	55	63	58	54	52					52			
6	76	64	56	50	74	63	55	50	61	54	49	60	54	49	58	53	49	47					47			
7	71	58	50	45	69	58	50	45	56	49	44	55	49	44	54	48	44	42					42			
8	66	54	46	41	65	53	46	41	52	45	40	51	45	40	50	44	40	38					38			
9	62	50	42	37	61	49	42	37	48	41	37	47	41	37	46	41	36	35					35			
10	58	46	39	34	57	46	39	34	45	38	34	44	38	34	43	38	34	32					32			

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

	0°	45°	90°
0°	8467	8467	8467
5°	8397	8374	8389
10°	8335	8144	8056
15°	8238	7849	7638
20°	8093	7476	7075
25°	7941	7033	6436
30°	7758	6545	5730
35°	7551	5991	4986
40°	7338	5383	4216
45°	7129	4746	3492
50°	6879	4037	2744
55°	6616	3281	1995
60°	6319	2446	1427
65°	5937	1614	1112
70°	5364	1122	779
75°	4665	727	606
80°	3656	541	497
85°	1890	446	357

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 7129 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	111.6	5.2
10°-20°	303.3	14.0
20°-30°	419.4	19.4
30°-40°	444.3	20.5
40°-50°	387.8	17.9
50°-60°	275.8	12.7
60°-70°	153.4	7.1
70°-80°	59.0	2.7
80°-90°	10.2	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°	834.2	38.5
0°-40°	1278.6	59.1
0°-60°	1942.2	89.7
0°-90°	2164.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2164.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1198	1198	1198	1198	1198	
5°	1183	1192	1180	1177	1182	112
15°	1126	1116	1072	1049	1044	317
25°	1018	984	902	846	825	469
35°	875	815	694	610	578	547
45°	713	628	475	379	349	550
55°	537	430	266	184	162	480
65°	355	233	96	71	66	351
75°	171	66	27	22	22	181
85°	23	7	6	4	4	34
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1197.7	1197.7	1197.7	1197.7	1197.7
2.5°	1188.8	1201.0	1191.1	1192.2	1193.3
5°	1183.3	1192.2	1180.0	1176.6	1182.2
7.5°	1174.4	1181.1	1160.0	1152.3	1155.6
10°	1161.1	1163.3	1134.5	1123.4	1122.3
12.5°	1144.5	1141.2	1105.7	1087.9	1086.8
15°	1125.6	1115.7	1072.4	1049.1	1043.6
17.5°	1102.3	1086.8	1033.6	1003.6	994.8
20°	1075.7	1054.7	993.7	954.8	940.4
22.5°	1049.1	1020.3	949.3	900.5	885.0
25°	1018.1	983.7	901.6	846.2	825.1
27.5°	984.8	943.8	852.8	788.5	763.0
30°	950.4	902.7	801.8	729.7	702.0
32.5°	913.8	859.5	748.6	669.8	641.0
35°	875.0	815.1	694.2	609.9	577.8
37.5°	836.2	769.6	641.0	551.2	517.9
40°	795.2	723.1	583.3	491.3	456.9
42.5°	755.2	675.4	529.0	434.7	403.7
45°	713.1	627.7	474.7	379.3	349.3
47.5°	669.8	577.8	420.3	327.2	297.2
50°	625.5	529.0	367.1	276.1	249.5
52.5°	581.1	480.2	317.2	227.3	204.1
55°	536.8	430.3	266.2	184.1	161.9
57.5°	492.4	381.5	218.5	144.2	124.2
60°	446.9	331.6	173.0	106.5	100.9
62.5°	401.5	282.8	134.2	87.6	83.2
65°	354.9	232.9	96.5	71.0	66.5
67.5°	308.3	187.4	69.9	54.3	51.0
70°	259.5	143.1	54.3	41.0	37.7
72.5°	212.9	103.1	38.8	29.9	28.8
75°	170.8	66.5	26.6	22.2	22.2
77.5°	128.6	39.9	18.9	16.6	16.6
80°	89.8	23.3	13.3	12.2	12.2
82.5°	54.3	12.2	8.9	7.8	7.8
85°	23.3	6.7	5.5	4.4	4.4
87.5°	4.4	2.2	2.2	2.2	2.2
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	18.58	20.03	18.95	20.34	20.66	11.22	12.67	11.59	12.98	13.30
	3H	20.14	21.43	20.52	21.76	22.12	11.79	13.07	12.16	13.40	13.76
	4H	20.66	21.87	21.06	22.22	22.60	11.91	13.11	12.31	13.46	13.84
	6H	21.00	22.11	21.41	22.48	22.87	11.97	13.08	12.39	13.45	13.84
	8H	21.08	22.13	21.51	22.52	22.93	11.98	13.03	12.41	13.42	13.82
	12H	21.11	22.11	21.54	22.50	22.92	11.97	12.98	12.40	13.36	13.79
4H	2H	18.48	19.68	18.88	20.03	20.41	11.79	12.99	12.19	13.34	13.72
	3H	20.15	21.13	20.56	21.54	21.94	12.46	13.45	12.87	13.85	14.25
	4H	20.70	21.58	21.13	22.00	22.44	12.62	13.50	13.05	13.92	14.36
	6H	21.09	21.85	21.55	22.30	22.76	12.73	13.49	13.19	13.94	14.40
	8H	21.19	21.91	21.66	22.35	22.82	12.74	13.45	13.21	13.90	14.37
	12H	21.24	21.87	21.72	22.35	22.83	12.74	13.37	13.23	13.86	14.33
8H	4H	20.60	21.31	21.07	21.76	22.23	12.89	13.60	13.35	14.04	14.51
	6H	20.99	21.57	21.48	22.06	22.54	13.02	13.60	13.52	14.10	14.58
	8H	21.09	21.62	21.61	22.13	22.62	13.05	13.57	13.57	14.08	14.57
	12H	21.16	21.62	21.67	22.11	22.68	13.07	13.53	13.58	14.03	14.59
12H	4H	20.56	21.20	21.05	21.68	22.15	12.90	13.53	13.39	14.01	14.49
	6H	20.93	21.46	21.45	21.97	22.46	13.03	13.56	13.55	14.07	14.56
	8H	21.06	21.52	21.57	22.02	22.59	13.09	13.55	13.60	14.05	14.62