

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: P1056489

Luminaire Tested: S125R3DR-S850D940-X4F0-XX-UDD-F-W

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1056489  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-10)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/25/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S125R3DR-S850D940-X4F0-XX-UDD-F-W  
Description: DEFINE 5, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
CORE LIGHT ENGINE  
Light Source: 4000K CCT, 90 CRI LEDS  
Ballast/Driver: -

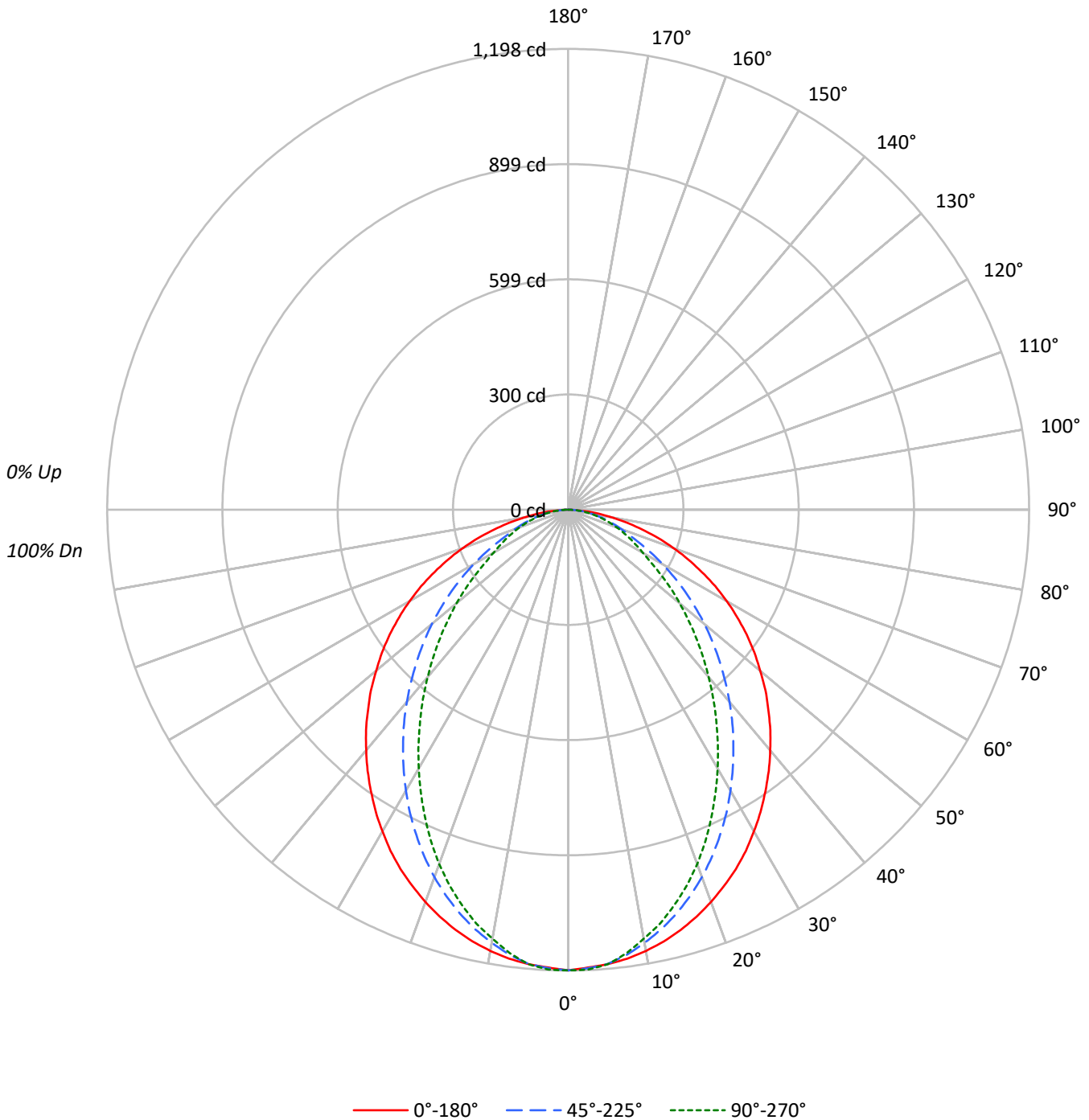
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2538.2 lumens  
Efficiency: N/A  
Efficacy: 96.1 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.01 / 1.17  
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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	110	105	101	98	107	103	100	96	99	96	93	95	93	90	91	90	88	86
2	101	93	87	81	98	91	85	80	88	83	79	84	80	77	81	78	75	73
3	92	83	75	69	90	81	74	68	78	72	67	75	70	66	73	69	65	63
4	85	74	66	59	83	73	65	59	70	63	58	68	62	57	66	61	57	55
5	79	67	58	52	77	66	58	52	63	56	51	62	55	51	60	54	50	48
6	73	60	52	46	71	59	51	46	58	51	45	56	50	45	55	49	45	43
7	68	55	47	41	66	54	46	41	53	46	41	51	45	40	50	44	40	38
8	63	51	42	37	62	50	42	37	49	42	37	47	41	36	46	40	36	34
9	59	47	39	33	58	46	39	33	45	38	33	44	38	33	43	37	33	31
10	56	43	36	31	55	43	35	31	42	35	30	41	35	30	40	34	30	28

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

	0°	45°	90°
0°	8466	8466	8466
5°	8416	8410	8416
10°	8360	8206	8130
15°	8275	7955	7792
20°	8164	7648	7373
25°	8040	7282	6872
30°	7883	6886	6340
35°	7711	6456	5787
40°	7538	6015	5242
45°	7355	5554	4698
50°	7159	5080	4158
55°	6978	4561	3616
60°	6733	4010	3177
65°	6398	3401	2954
70°	6009	3040	2766
75°	5433	2800	2606
80°	4718	2540	2430
85°	3691	2239	2239

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 7355 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	112.0	4.4
10°-20°	307.7	12.1
20°-30°	434.6	17.1
30°-40°	478.4	18.8
40°-50°	446.3	17.6
50°-60°	356.3	14.0
60°-70°	239.7	9.4
70°-80°	127.7	5.0
80°-90°	35.5	1.4
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°	854.3	33.7
0°-40°	1332.7	52.5
0°-60°	2135.3	84.1
0°-90°	2538.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2538.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1198	1198	1198	1198	1198	
5°	1186	1196	1185	1182	1186	113
15°	1131	1124	1087	1068	1065	319
25°	1031	1000	934	893	881	474
35°	894	841	748	689	671	559
45°	736	666	556	488	470	568
55°	566	481	370	311	293	505
65°	382	299	203	180	177	379
75°	199	132	102	96	95	212
85°	46	31	28	28	28	54
90°	0	0	0	0	0	

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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1197.6	1197.6	1197.6	1197.6	1197.6
2.5°	1191.3	1201.1	1193.1	1194.9	1196.7
5°	1186.0	1195.8	1185.1	1181.5	1186.0
7.5°	1177.1	1185.1	1167.2	1159.2	1162.8
10°	1164.6	1169.9	1143.2	1132.5	1132.5
12.5°	1149.4	1149.4	1117.3	1102.2	1102.2
15°	1130.7	1124.4	1087.0	1068.3	1064.7
17.5°	1109.3	1097.7	1053.1	1029.0	1024.6
20°	1085.2	1066.5	1016.6	985.3	980.0
22.5°	1058.5	1034.4	976.4	938.1	931.8
25°	1030.8	999.6	933.6	892.6	881.0
27.5°	999.6	962.2	889.9	843.6	829.3
30°	965.7	922.9	843.6	791.8	776.7
32.5°	930.9	882.8	796.3	741.0	724.1
35°	893.5	840.9	748.1	689.3	670.6
37.5°	856.0	799.0	700.9	639.4	619.7
40°	816.8	754.4	651.8	588.5	568.0
42.5°	777.6	710.7	603.7	539.5	518.1
45°	735.7	666.1	555.5	487.8	469.9
47.5°	695.5	620.6	508.3	442.3	422.7
50°	650.9	573.4	461.9	395.9	378.1
52.5°	609.9	527.0	415.5	354.0	335.3
55°	566.2	480.6	370.1	311.2	293.4
57.5°	520.8	434.3	326.4	271.1	254.1
60°	476.2	387.9	283.6	232.7	224.7
62.5°	430.7	344.2	243.4	204.2	198.9
65°	382.5	298.7	203.3	180.1	176.6
67.5°	337.1	255.0	171.2	157.8	154.3
70°	290.7	211.3	147.1	135.5	133.8
72.5°	245.2	169.4	123.9	115.9	114.1
75°	198.9	132.0	102.5	96.3	95.4
77.5°	156.0	99.0	81.1	78.5	76.7
80°	115.9	74.0	62.4	60.6	59.7
82.5°	79.4	50.8	44.6	44.6	42.8
85°	45.5	31.2	27.6	28.5	27.6
87.5°	16.9	13.4	12.5	13.4	13.4
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	18.71	20.25	19.08	20.56	20.88	15.09	16.63	15.46	16.95	17.26
	3H	20.50	21.88	20.87	22.21	22.57	16.57	17.95	16.95	18.28	18.64
	4H	21.15	22.45	21.55	22.80	23.17	17.16	18.46	17.56	18.81	19.18
	6H	21.63	22.83	22.04	23.19	23.58	17.62	18.82	18.03	19.19	19.58
	8H	21.78	22.92	22.21	23.31	23.71	17.78	18.93	18.21	19.31	19.72
	12H	21.87	22.97	22.30	23.35	23.78	17.90	18.99	18.33	19.37	19.80
4H	2H	18.84	20.14	19.24	20.49	20.87	15.77	17.07	16.17	17.42	17.79
	3H	20.81	21.90	21.23	22.29	22.70	17.45	18.53	17.86	18.93	19.33
	4H	21.56	22.53	21.99	22.95	23.39	18.15	19.12	18.58	19.54	19.98
	6H	22.15	23.00	22.61	23.44	23.90	18.73	19.58	19.19	20.02	20.48
	8H	22.36	23.15	22.82	23.60	24.06	18.94	19.74	19.41	20.18	20.65
	12H	22.51	23.22	22.99	23.70	24.17	19.10	19.81	19.59	20.29	20.76
8H	4H	21.62	22.42	22.09	22.86	23.33	18.51	19.31	18.98	19.75	20.22
	6H	22.28	22.94	22.78	23.43	23.91	19.21	19.87	19.71	20.36	20.84
	8H	22.54	23.13	23.05	23.63	24.12	19.50	20.09	20.01	20.60	21.08
	12H	22.74	23.27	23.25	23.76	24.32	19.74	20.26	20.25	20.75	21.32
12H	4H	21.62	22.33	22.10	22.80	23.27	18.56	19.27	19.04	19.75	20.22
	6H	22.28	22.87	22.79	23.38	23.86	19.29	19.88	19.80	20.39	20.87
	8H	22.57	23.09	23.08	23.58	24.15	19.63	20.15	20.14	20.64	21.21