

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: P1056624

Luminaire Tested: S125R3DR-H850D940-X4F0-XX-UDD-F-W

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1056624  
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-H850D940-X4F0-XX-UDD-F-W  
Description: DEFINE 5, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 4000K CCT, 90 CRI LEDS  
Ballast/Driver: -

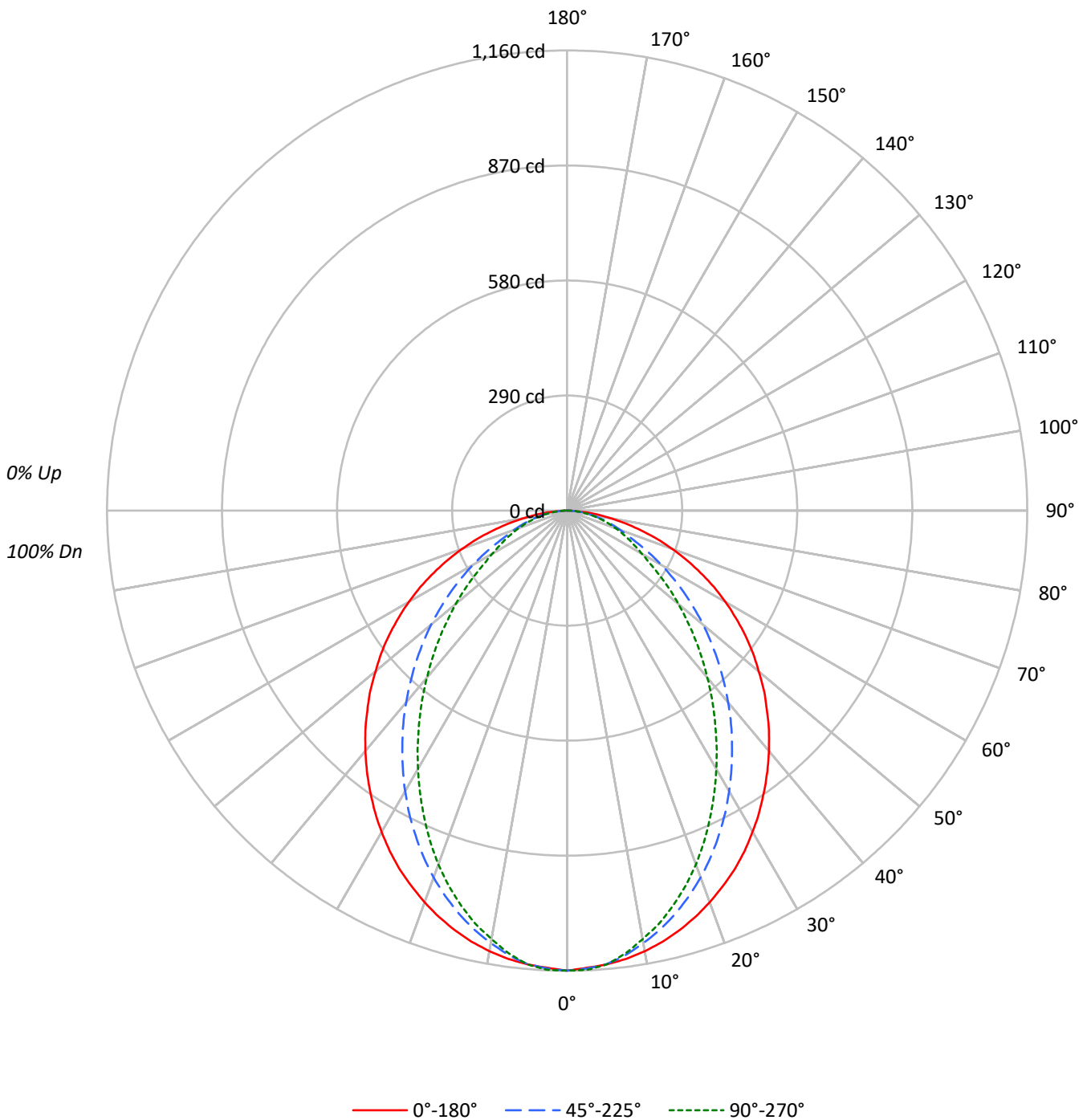
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2458.0 lumens  
Efficiency: N/A  
Efficacy: 103.3 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): 23.8  
Input Voltage (V): 120  
Input Current (Ain): 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	30	42	35	30	41	35	30	40	34	30	28

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

	0°	45°	90°
0°	8198	8198	8198
5°	8150	8144	8150
10°	8095	7946	7873
15°	8013	7704	7546
20°	7906	7406	7139
25°	7786	7052	6654
30°	7634	6668	6139
35°	7467	6252	5604
40°	7300	5825	5077
45°	7122	5379	4550
50°	6933	4919	4026
55°	6758	4417	3502
60°	6519	3882	3077
65°	6196	3294	2860
70°	5818	2945	2677
75°	5261	2712	2524
80°	4572	2459	2357
85°	3569	2174	2174

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 7122 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	108.5	4.4
10°-20°	297.9	12.1
20°-30°	420.9	17.1
30°-40°	463.3	18.8
40°-50°	432.2	17.6
50°-60°	345.0	14.0
60°-70°	232.2	9.4
70°-80°	123.7	5.0
80°-90°	34.4	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°	827.3	33.7
0°-40°	1290.6	52.5
0°-60°	2067.7	84.1
0°-90°	2458.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2458.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1160	1160	1160	1160	1160	
5°	1148	1158	1148	1144	1148	109
15°	1095	1089	1053	1034	1031	309
25°	998	968	904	864	853	459
35°	865	814	724	668	649	541
45°	712	645	538	472	455	550
55°	548	465	358	301	284	489
65°	370	289	197	174	171	367
75°	193	128	99	93	92	205
85°	44	30	27	28	27	53
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1159.7	1159.7	1159.7	1159.7	1159.7
2.5°	1153.6	1163.1	1155.4	1157.1	1158.8
5°	1148.5	1158.0	1147.6	1144.1	1148.5
7.5°	1139.8	1147.6	1130.3	1122.6	1126.0
10°	1127.7	1132.9	1107.0	1096.7	1096.7
12.5°	1113.1	1113.1	1082.0	1067.3	1067.3
15°	1094.9	1088.9	1052.6	1034.5	1031.0
17.5°	1074.2	1063.0	1019.8	996.5	992.2
20°	1050.9	1032.8	984.4	954.2	949.0
22.5°	1025.0	1001.7	945.5	908.4	902.4
25°	998.2	968.0	904.1	864.4	853.1
27.5°	968.0	931.7	861.8	816.9	803.1
30°	935.2	893.7	816.9	766.8	752.1
32.5°	901.5	854.9	771.1	717.6	701.2
35°	865.2	814.3	724.5	667.5	649.4
37.5°	829.0	773.7	678.7	619.1	600.1
40°	791.0	730.5	631.2	569.9	550.1
42.5°	753.0	688.2	584.6	522.4	501.7
45°	712.4	645.0	538.0	472.3	455.1
47.5°	673.5	601.0	492.2	428.3	409.3
50°	630.4	555.2	447.3	383.4	366.1
52.5°	590.6	510.3	402.4	342.8	324.7
55°	548.3	465.4	358.4	301.4	284.1
57.5°	504.3	420.5	316.0	262.5	246.1
60°	461.1	375.6	274.6	225.4	217.6
62.5°	417.1	333.3	235.7	197.7	192.6
65°	370.4	289.3	196.9	174.4	171.0
67.5°	326.4	247.0	165.8	152.8	149.4
70°	281.5	204.7	142.5	131.3	129.5
72.5°	237.5	164.1	120.0	112.3	110.5
75°	192.6	127.8	99.3	93.3	92.4
77.5°	151.1	95.8	78.6	76.0	74.3
80°	112.3	71.7	60.4	58.7	57.9
82.5°	76.9	49.2	43.2	43.2	41.4
85°	44.0	30.2	26.8	27.6	26.8
87.5°	16.4	13.0	12.1	13.0	13.0
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	18.60	20.14	18.96	20.45	20.77	14.98	16.52	15.35	16.83	17.15
	3H	20.38	21.77	20.76	22.09	22.46	16.46	17.84	16.83	18.17	18.53
	4H	21.04	22.34	21.44	22.68	23.06	17.05	18.35	17.45	18.69	19.07
	6H	21.51	22.71	21.93	23.08	23.47	17.51	18.71	17.92	19.08	19.47
	8H	21.67	22.81	22.09	23.20	23.60	17.67	18.81	18.10	19.20	19.60
	12H	21.76	22.86	22.19	23.24	23.67	17.78	18.88	18.21	19.26	19.69
4H	2H	18.73	20.03	19.13	20.38	20.76	15.66	16.96	16.06	17.30	17.68
	3H	20.70	21.78	21.11	22.18	22.58	17.33	18.42	17.74	18.81	19.22
	4H	21.45	22.42	21.88	22.84	23.28	18.04	19.01	18.47	19.43	19.86
	6H	22.04	22.89	22.50	23.33	23.79	18.62	19.47	19.08	19.91	20.37
	8H	22.25	23.04	22.71	23.49	23.95	18.83	19.62	19.29	20.07	20.54
	12H	22.40	23.11	22.88	23.58	24.05	18.99	19.70	19.47	20.18	20.65
8H	4H	21.51	22.30	21.97	22.75	23.21	18.40	19.19	18.86	19.64	20.11
	6H	22.17	22.83	22.67	23.32	23.79	19.10	19.76	19.60	20.25	20.73
	8H	22.42	23.01	22.94	23.52	24.01	19.39	19.98	19.90	20.49	20.97
	12H	22.63	23.15	23.14	23.65	24.21	19.63	20.15	20.14	20.64	21.21
12H	4H	21.50	22.21	21.99	22.69	23.16	18.45	19.16	18.93	19.64	20.11
	6H	22.17	22.76	22.68	23.26	23.75	19.18	19.77	19.69	20.27	20.76
	8H	22.46	22.98	22.97	23.47	24.04	19.52	20.04	20.03	20.53	21.10