

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: P1056608

Luminaire Tested: S125R3DR-H850D840-X4F0-XX-UDD-F-S

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1056608
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-H850D840-X4F0-XX-UDD-F-S
Description: DEFINE 5, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

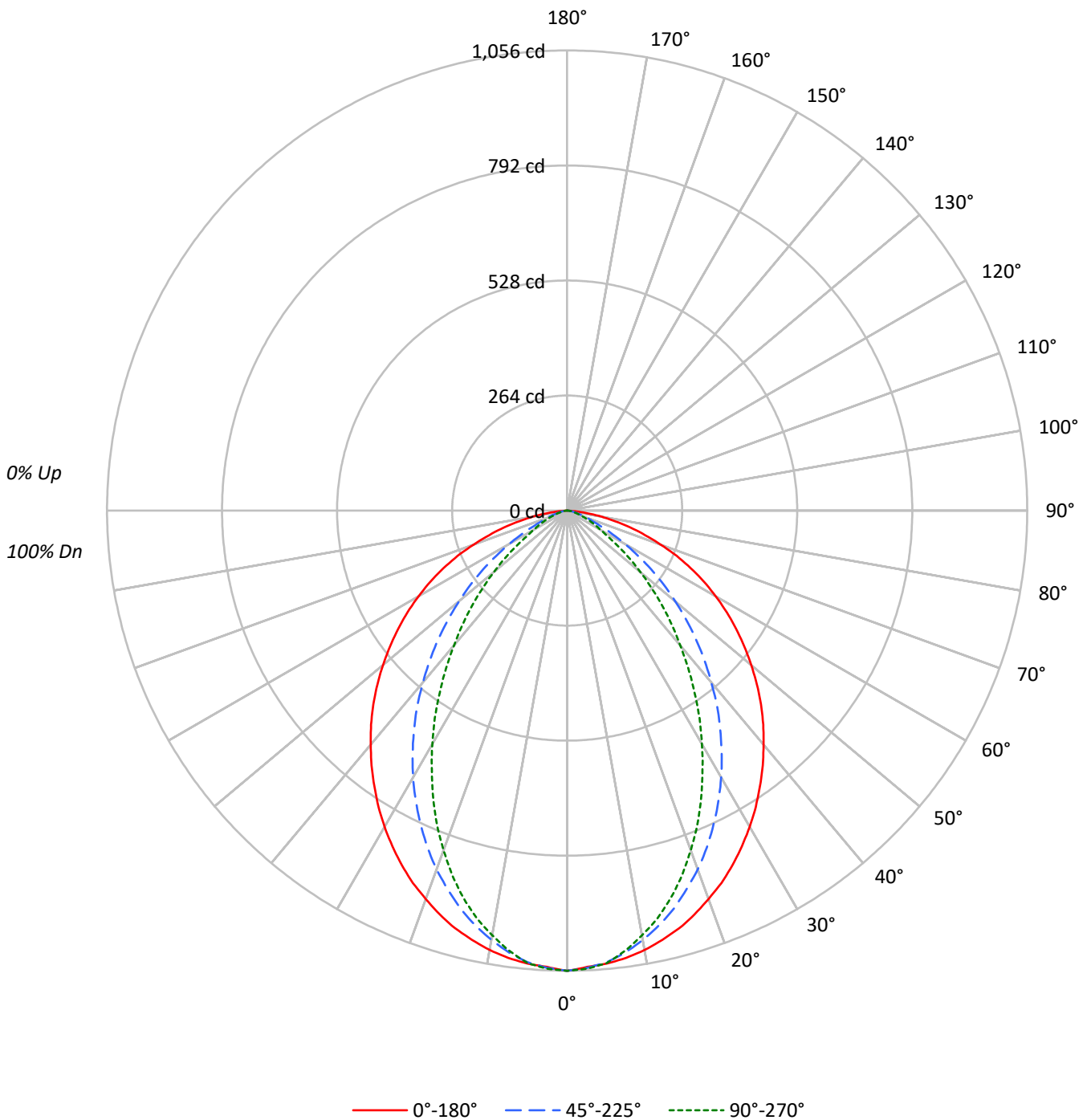
Lumens per Lamp: N/A
Luminaire Lumens: 1908.9 lumens
Efficiency: N/A
Efficacy: 80.2 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.95 / 1.11
Luminous Opening: Rectangular (W 0.39' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 23.8
Input Voltage (V): 120
Input Current (A_{in}): 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	107	103	100	108	105	102	99	101	98	96	97	95	93	93	92	90	88
2	102	96	90	85	100	94	89	84	90	86	82	87	84	80	84	81	79	77
3	95	86	79	73	92	84	78	73	81	76	71	79	74	70	76	72	69	67
4	88	77	70	64	86	76	69	63	74	67	62	71	66	62	69	65	61	59
5	81	70	62	56	79	69	61	56	67	60	55	65	59	55	63	58	54	52
6	76	64	56	50	74	63	55	50	61	54	49	60	54	49	58	53	49	47
7	71	58	50	45	69	58	50	45	56	49	44	55	49	44	54	48	44	42
8	66	54	46	41	65	53	46	41	52	45	40	51	45	40	50	44	40	38
9	62	50	42	37	61	49	42	37	48	41	37	47	41	37	46	41	36	35
10	58	46	39	34	57	46	39	34	45	38	34	44	38	34	43	38	34	32

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7467	7467	7467
5°	7404	7384	7398
10°	7350	7181	7104
15°	7265	6921	6735
20°	7136	6592	6239
25°	7002	6202	5675
30°	6841	5771	5053
35°	6659	5283	4397
40°	6471	4747	3718
45°	6286	4185	3079
50°	6065	3560	2420
55°	5833	2893	1760
60°	5572	2158	1258
65°	5234	1424	982
70°	4729	990	686
75°	4113	642	535
80°	3224	476	440
85°	1663	397	316

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6286 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	98.4	5.2
10°-20°	267.4	14.0
20°-30°	369.8	19.4
30°-40°	391.8	20.5
40°-50°	342.0	17.9
50°-60°	243.2	12.7
60°-70°	135.3	7.1
70°-80°	52.0	2.7
80°-90°	9.0	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°	735.6	38.5
0°-40°	1127.4	59.1
0°-60°	1712.7	89.7
0°-90°	1908.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1908.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1056	1056	1056	1056	1056	
5°	1043	1051	1040	1038	1042	99
15°	993	984	946	925	920	280
25°	898	867	795	746	728	413
35°	772	719	612	538	510	483
45°	629	554	419	334	308	485
55°	473	379	235	162	143	423
65°	313	205	85	63	59	309
75°	151	59	24	20	20	160
85°	20	6	5	4	4	30
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1056.2	1056.2	1056.2	1056.2	1056.2
2.5°	1048.3	1059.1	1050.3	1051.3	1052.2
5°	1043.4	1051.3	1040.5	1037.6	1042.5
7.5°	1035.6	1041.5	1022.9	1016.1	1019.0
10°	1023.9	1025.8	1000.4	990.6	989.7
12.5°	1009.2	1006.3	975.0	959.3	958.4
15°	992.6	983.8	945.7	925.1	920.2
17.5°	972.1	958.4	911.4	885.0	877.2
20°	948.6	930.0	876.2	842.0	829.3
22.5°	925.1	899.7	837.1	794.1	780.4
25°	897.7	867.4	795.1	746.2	727.6
27.5°	868.4	832.2	752.0	695.3	672.8
30°	838.1	796.0	707.0	643.5	619.0
32.5°	805.8	757.9	660.1	590.7	565.2
35°	771.6	718.8	612.2	537.9	509.5
37.5°	737.4	678.7	565.2	486.0	456.7
40°	701.2	637.6	514.4	433.2	402.9
42.5°	666.0	595.6	466.5	383.3	356.0
45°	628.8	553.5	418.6	334.4	308.0
47.5°	590.7	509.5	370.6	288.5	262.1
50°	551.5	466.5	323.7	243.5	220.0
52.5°	512.4	423.4	279.7	200.5	179.9
55°	473.3	379.4	234.7	162.3	142.8
57.5°	434.2	336.4	192.7	127.1	109.5
60°	394.1	292.4	152.6	93.9	89.0
62.5°	354.0	249.4	118.3	77.3	73.3
65°	312.9	205.4	85.1	62.6	58.7
67.5°	271.9	165.3	61.6	47.9	45.0
70°	228.8	126.2	47.9	36.2	33.2
72.5°	187.8	90.9	34.2	26.4	25.4
75°	150.6	58.7	23.5	19.6	19.6
77.5°	113.4	35.2	16.6	14.7	14.7
80°	79.2	20.5	11.7	10.8	10.8
82.5°	47.9	10.8	7.8	6.8	6.8
85°	20.5	5.9	4.9	3.9	3.9
87.5°	3.9	2.0	2.0	2.0	2.0
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	18.15	19.59	18.51	19.90	20.22	10.78	12.23	11.15	12.54	12.86
	3H	19.71	20.99	20.08	21.32	21.68	11.35	12.63	11.72	12.96	13.32
	4H	20.23	21.43	20.63	21.78	22.16	11.47	12.67	11.87	13.02	13.40
	6H	20.56	21.67	20.98	22.04	22.43	11.54	12.64	11.95	13.01	13.40
	8H	20.65	21.70	21.07	22.09	22.49	11.54	12.59	11.97	12.98	13.39
	12H	20.67	21.68	21.10	22.06	22.49	11.53	12.54	11.96	12.92	13.35
4H	2H	18.04	19.24	18.44	19.59	19.97	11.35	12.55	11.75	12.90	13.28
	3H	19.71	20.70	20.12	21.10	21.50	12.02	13.01	12.43	13.41	13.81
	4H	20.26	21.14	20.69	21.56	22.00	12.18	13.06	12.61	13.48	13.92
	6H	20.65	21.42	21.11	21.86	22.32	12.29	13.06	12.75	13.50	13.96
	8H	20.76	21.47	21.22	21.91	22.38	12.30	13.02	12.77	13.46	13.93
	12H	20.80	21.44	21.29	21.92	22.39	12.30	12.94	12.79	13.42	13.89
8H	4H	20.16	20.88	20.63	21.32	21.79	12.45	13.16	12.91	13.61	14.08
	6H	20.55	21.13	21.05	21.63	22.11	12.58	13.17	13.08	13.66	14.14
	8H	20.66	21.18	21.17	21.69	22.18	12.61	13.14	13.13	13.65	14.14
	12H	20.72	21.18	21.23	21.68	22.24	12.63	13.10	13.14	13.59	14.16
12H	4H	20.13	20.76	20.61	21.24	21.71	12.46	13.10	12.95	13.58	14.05
	6H	20.50	21.02	21.01	21.53	22.02	12.59	13.12	13.11	13.63	14.12
	8H	20.62	21.09	21.14	21.58	22.15	12.65	13.12	13.16	13.61	14.18