

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: P1056610

Luminaire Tested: S125R3DR-H850D850-X4F0-XX-UDD-F-B

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1056610
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-H850D850-X4F0-XX-UDD-F-B
Description: DEFINE 5, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 5000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

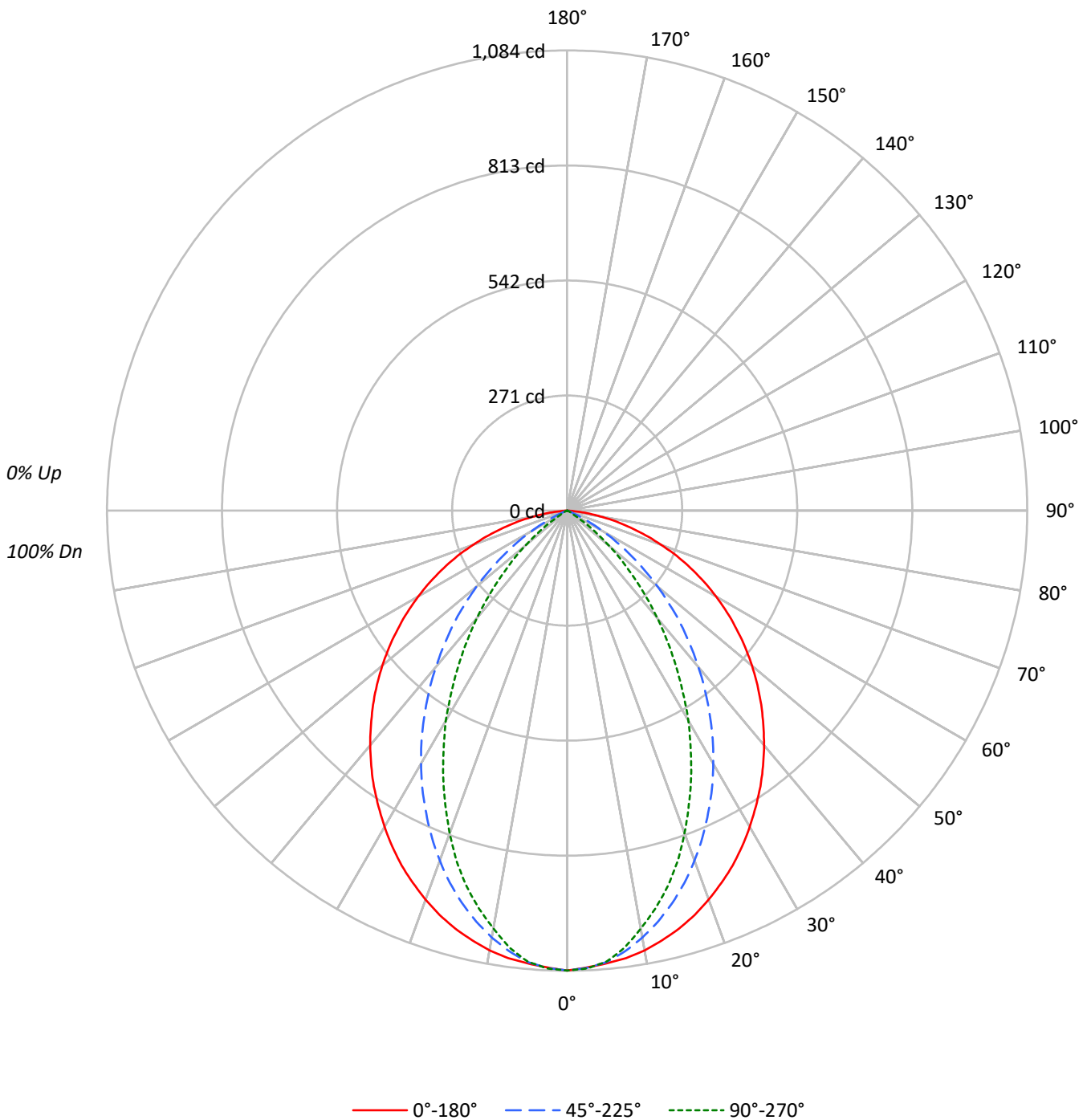
Lumens per Lamp: N/A
Luminaire Lumens: 1756.3 lumens
Efficiency: N/A
Efficacy: 73.8 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.89 / 1.07
Luminous Opening: Rectangular (W 0.39' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 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

TEST NUMBER: P1056610

CATALOG NUMBER: S125R3DR-H850D850-X4F0-XX-UDD-F-B

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	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°	7660	7660	7660
5°	7598	7575	7568
10°	7555	7331	7177
15°	7459	7003	6705
20°	7336	6601	6084
25°	7196	6132	5395
30°	7022	5619	4664
35°	6849	5051	3856
40°	6660	4440	3053
45°	6463	3790	2211
50°	6248	3059	1429
55°	6010	2237	635
60°	5725	1381	182
65°	5371	503	107
70°	4861	178	43
75°	4223	57	30
80°	3236	45	0
85°	1484	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6463 cd/sqm



TEST NUMBER: P1056610

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	100.6	5.7
10°-20°	270.2	15.4
20°-30°	365.6	20.8
30°-40°	375.6	21.4
40°-50°	311.2	17.7
50°-60°	199.8	11.4
60°-70°	96.5	5.5
70°-80°	32.7	1.9
80°-90°	4.2	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°	736.5	41.9
0°-40°	1112.1	63.3
0°-60°	1623.0	92.4
0°-90°	1756.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1756.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1084	1084	1084	1084	1084	
5°	1071	1079	1068	1061	1066	102
15°	1019	1006	957	924	916	287
25°	922	877	786	715	692	425
35°	794	717	585	483	447	496
45°	646	540	379	262	221	499
55°	488	358	182	80	52	436
65°	321	177	30	9	6	318
75°	155	33	2	1	1	164
85°	18	0	0	0	0	29
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1083.6	1083.6	1083.6	1083.6	1083.6
2.5°	1077.1	1085.7	1078.2	1077.1	1079.3
5°	1070.7	1079.3	1067.5	1061.0	1066.4
7.5°	1063.2	1067.5	1047.1	1036.3	1038.5
10°	1052.4	1051.4	1021.3	1003.0	999.8
12.5°	1036.3	1031.0	991.2	965.5	960.1
15°	1019.2	1006.3	956.9	923.6	916.1
17.5°	998.8	978.3	919.3	876.3	865.6
20°	975.1	947.2	877.4	824.8	808.7
22.5°	949.3	913.9	833.4	771.1	749.6
25°	922.5	877.4	786.1	715.2	691.6
27.5°	892.4	839.8	738.9	658.3	629.3
30°	860.2	800.1	688.4	600.3	571.3
32.5°	826.9	760.3	637.9	542.3	506.9
35°	793.6	717.4	585.3	483.3	446.8
37.5°	758.2	674.4	533.7	427.4	387.7
40°	721.7	630.4	481.1	369.4	330.8
42.5°	684.1	585.3	428.5	314.7	274.9
45°	646.5	540.2	379.1	262.0	221.2
47.5°	607.8	494.0	327.5	210.5	175.0
50°	568.1	448.9	278.1	164.3	129.9
52.5°	528.4	402.7	227.7	119.2	88.1
55°	487.6	357.6	181.5	79.5	51.5
57.5°	446.8	311.4	138.5	44.0	19.3
60°	404.9	267.4	97.7	15.0	12.9
62.5°	364.1	220.2	61.2	11.8	9.7
65°	321.1	177.2	30.1	8.6	6.4
67.5°	279.2	136.4	12.9	5.4	3.2
70°	235.2	98.8	8.6	3.2	2.1
72.5°	194.4	63.4	5.4	2.1	1.1
75°	154.6	33.3	2.1	1.1	1.1
77.5°	116.0	14.0	1.1	1.1	1.1
80°	79.5	6.4	1.1	1.1	0.0
82.5°	47.3	2.1	1.1	1.1	0.0
85°	18.3	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	18.14	19.53	18.51	19.84	20.15	3.00	4.39	3.37	4.70	5.01
	3H	19.69	20.92	20.07	21.25	21.61	2.92	4.15	3.30	4.48	4.84
	4H	20.21	21.36	20.62	21.71	22.09	2.86	4.00	3.26	4.35	4.73
	6H	20.55	21.61	20.97	21.97	22.37	2.79	3.84	3.20	4.21	4.60
	8H	20.64	21.63	21.06	22.02	22.43	2.75	3.74	3.18	4.13	4.54
	12H	20.65	21.61	21.08	21.99	22.42	2.71	3.66	3.14	4.04	4.47
4H	2H	17.95	19.09	18.35	19.44	19.82	3.87	5.01	4.27	5.36	5.74
	3H	19.56	20.49	19.97	20.90	21.30	3.82	4.75	4.23	5.15	5.56
	4H	20.08	20.92	20.52	21.33	21.78	3.74	4.57	4.17	4.99	5.43
	6H	20.46	21.18	20.92	21.62	22.09	3.67	4.39	4.14	4.84	5.30
	8H	20.56	21.23	21.02	21.67	22.14	3.62	4.30	4.09	4.74	5.21
	12H	20.59	21.18	21.08	21.67	22.14	3.58	4.18	4.07	4.66	5.13
8H	4H	19.95	20.62	20.42	21.07	21.54	4.76	5.43	5.23	5.88	6.35
	6H	20.31	20.86	20.81	21.35	21.83	4.68	5.23	5.18	5.72	6.20
	8H	20.40	20.90	20.92	21.41	21.90	4.63	5.12	5.15	5.64	6.13
	12H	20.45	20.88	20.96	21.38	21.95	4.59	5.02	5.10	5.52	6.09
12H	4H	19.91	20.50	20.40	20.99	21.46	4.84	5.43	5.33	5.92	6.39
	6H	20.25	20.74	20.77	21.26	21.75	4.74	5.24	5.26	5.75	6.24
	8H	20.36	20.80	20.88	21.29	21.86	4.71	5.15	5.23	5.64	6.21