

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P1061866

Luminaire Tested: S125RDR-H1090D850-X4F0-XX-UDD-BVL-B

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1061866
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2406-143-48)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S125RDR-H1090D850-X4F0-XX-UDD-BVL-B
Description: DEFINE 5 BLACK REGRESSED DIRECT RECESSED HOUSING WITH BLACK STRAIGHT BLADE LOUVER WITH DIFFUSER
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 5000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

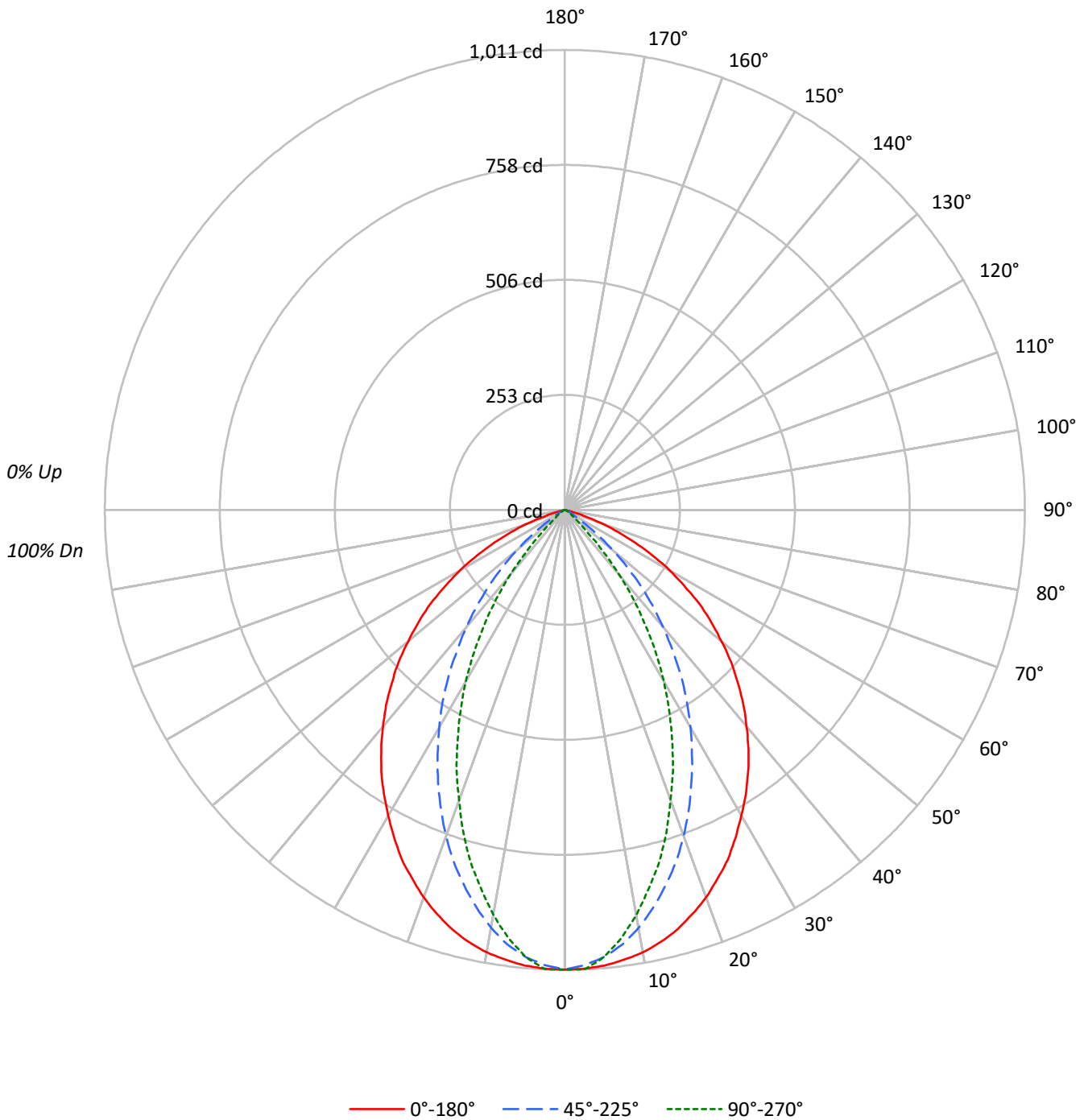
Lumens per Lamp: N/A
Luminaire Lumens: 1305.8 lumens
Efficiency: N/A
Efficacy: 41.9 lumens/watt
Spacing Criteria (0/90/45): 1.15 / 0.81 / 0.97
Luminous Opening: Rectangular (W 0.39' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 31.2
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

TEST NUMBER: P1061866

CATALOG NUMBER: S125RDR-H1090D850-X4F0-XX-UDD-BVL-B

Luminous Intensity Polar Plot





TEST NUMBER: P1061866

CATALOG NUMBER: S125RDR-H1090D850-X4F0-XX-UDD-BVL-B

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	112	109	106	103	110	107	104	102	103	101	99	99	97	96	95	94	93	91
2	105	99	94	90	103	97	93	89	94	90	87	91	88	85	88	86	83	82
3	98	90	84	80	96	89	83	79	86	82	78	84	80	76	81	78	75	73
4	92	83	76	71	90	82	75	70	79	74	70	77	72	69	75	71	68	66
5	86	76	69	64	84	75	68	63	73	67	63	71	66	62	70	65	62	60
6	81	70	63	58	79	69	62	57	67	61	57	66	61	57	65	60	56	54
7	76	65	58	53	74	64	57	52	63	56	52	61	56	52	60	55	51	50
8	71	60	53	48	70	59	53	48	58	52	48	57	52	48	56	51	47	46
9	67	56	49	44	66	55	49	44	54	48	44	53	48	44	52	47	44	42
10	64	52	46	41	62	52	45	41	51	45	41	50	45	41	49	44	41	39

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6960	6960	6960
5°	6950	6820	6820
10°	6908	6527	6321
15°	6806	6093	5712
20°	6644	5589	4974
25°	6443	5005	4235
30°	6170	4389	3456
35°	5907	3744	2589
40°	5585	3020	1678
45°	5233	2285	727
50°	4814	1457	271
55°	4338	640	192
60°	3673	275	128
65°	2781	174	65
70°	1691	81	26
75°	354	35	35
80°	0	0	0
85°	0	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5233 cd/sqm



TEST NUMBER: P1061866

CATALOG NUMBER: S125RDR-H1090D850-X4F0-XX-UDD-BVL-B

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	93.2	7.1
10°-20°	242.9	18.6
20°-30°	311.9	23.9
30°-40°	293.6	22.5
40°-50°	205.3	15.7
50°-60°	109.7	8.4
60°-70°	43.7	3.3
70°-80°	5.6	0.4
80°-90°	0.0	0.0
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°	647.9	49.6
0°-40°	941.5	72.1
0°-60°	1256.4	96.2
0°-90°	1305.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1305.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1011	1011	1011	1011	1011	
5°	1006	1003	987	990	987	95
15°	955	924	855	815	801	269
25°	848	773	659	587	557	389
35°	703	591	445	344	308	439
45°	537	403	235	113	75	415
55°	361	221	53	19	16	320
65°	171	68	11	5	4	170
75°	13	4	1	1	1	26
85°	0	0	0	0	0	0
90°	0	0	0	0	0	0



TEST NUMBER: P1061866

CATALOG NUMBER: S125RDR-H1090D850-X4F0-XX-UDD-BVL-B

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1010.8	1010.8	1010.8	1010.8	1010.8
2.5°	1009.5	1010.8	1001.5	1009.5	1010.8
5°	1005.5	1002.8	986.8	989.5	986.8
7.5°	997.5	990.8	964.1	954.8	949.5
10°	988.1	973.5	933.5	913.5	904.1
12.5°	973.5	952.1	896.1	865.4	852.1
15°	954.8	924.1	854.8	814.8	801.4
17.5°	932.1	892.1	812.1	762.8	742.8
20°	906.8	853.4	762.8	704.1	678.8
22.5°	877.4	816.1	712.1	646.8	621.4
25°	848.1	773.4	658.8	586.7	557.4
27.5°	812.1	729.4	605.4	528.1	496.1
30°	776.1	685.4	552.1	468.1	434.7
32.5°	740.1	638.7	498.7	405.4	372.0
35°	702.8	590.7	445.4	344.0	308.0
37.5°	662.8	542.7	388.1	285.4	248.0
40°	621.4	496.1	336.0	228.0	186.7
42.5°	581.4	449.4	284.0	172.0	126.7
45°	537.4	402.7	234.7	113.3	74.7
47.5°	496.1	357.4	184.0	65.3	38.7
50°	449.4	310.7	136.0	34.7	25.3
52.5°	405.4	265.4	90.7	22.7	20.0
55°	361.4	221.4	53.3	18.7	16.0
57.5°	310.7	178.7	29.3	14.7	12.0
60°	266.7	140.0	20.0	10.7	9.3
62.5°	216.0	102.7	14.7	8.0	6.7
65°	170.7	68.0	10.7	5.3	4.0
67.5°	126.7	40.0	6.7	2.7	2.7
70°	84.0	21.3	4.0	1.3	1.3
72.5°	44.0	9.3	2.7	1.3	1.3
75°	13.3	4.0	1.3	1.3	1.3
77.5°	0.0	1.3	0.0	0.0	1.3
80°	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P1061866
 CATALOG NUMBER: S125RDR-H1090D850-X4F0-XX-UDD-BVL-B

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	15.68	16.95	16.05	17.26	17.58	0.00	0.00	0.00	0.00	0.00
	3H	16.27	17.38	16.65	17.71	18.08	0.00	0.00	0.00	0.00	0.00
	4H	16.23	17.26	16.64	17.62	18.00	0.00	0.00	0.00	0.00	0.00
	6H	16.15	17.09	16.56	17.46	17.86	0.00	0.00	0.00	0.00	0.00
	8H	16.10	16.99	16.53	17.39	17.79	0.00	0.00	0.00	0.00	0.00
	12H	16.05	16.91	16.49	17.29	17.72	0.00	0.00	0.00	0.00	0.00
4H	2H	15.46	16.49	15.86	16.84	17.23	0.00	0.00	0.00	0.00	0.00
	3H	16.05	16.88	16.46	17.29	17.69	0.00	0.00	0.00	0.00	0.00
	4H	16.00	16.74	16.43	17.16	17.61	0.00	0.00	0.00	0.00	0.00
	6H	15.91	16.55	16.38	17.00	17.47	0.00	0.00	0.00	0.00	0.00
	8H	15.85	16.45	16.32	16.89	17.37	0.00	0.00	0.00	0.00	0.00
	12H	15.80	16.32	16.29	16.81	17.28	0.00	0.00	0.00	0.00	0.00
8H	4H	15.85	16.45	16.32	16.89	17.37	0.00	0.00	0.00	0.00	0.00
	6H	15.75	16.23	16.25	16.72	17.21	0.00	0.00	0.00	0.00	0.00
	8H	15.68	16.11	16.20	16.63	17.12	0.00	0.00	0.00	0.00	0.00
	12H	15.63	16.01	16.15	16.51	17.08	0.00	0.00	0.00	0.00	0.00
12H	4H	15.80	16.32	16.29	16.81	17.28	0.00	0.00	0.00	0.00	0.00
	6H	15.68	16.11	16.20	16.63	17.12	0.00	0.00	0.00	0.00	0.00
	8H	15.63	16.01	16.15	16.51	17.08	0.00	0.00	0.00	0.00	0.00