

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: P1062163

Luminaire Tested: S125RDR-H850D830-X4F0-XX-UDD-BVL-B

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1062163  
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-H850D830-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: 3000K CCT, 80 CRI LEDS  
Ballast/Driver: -

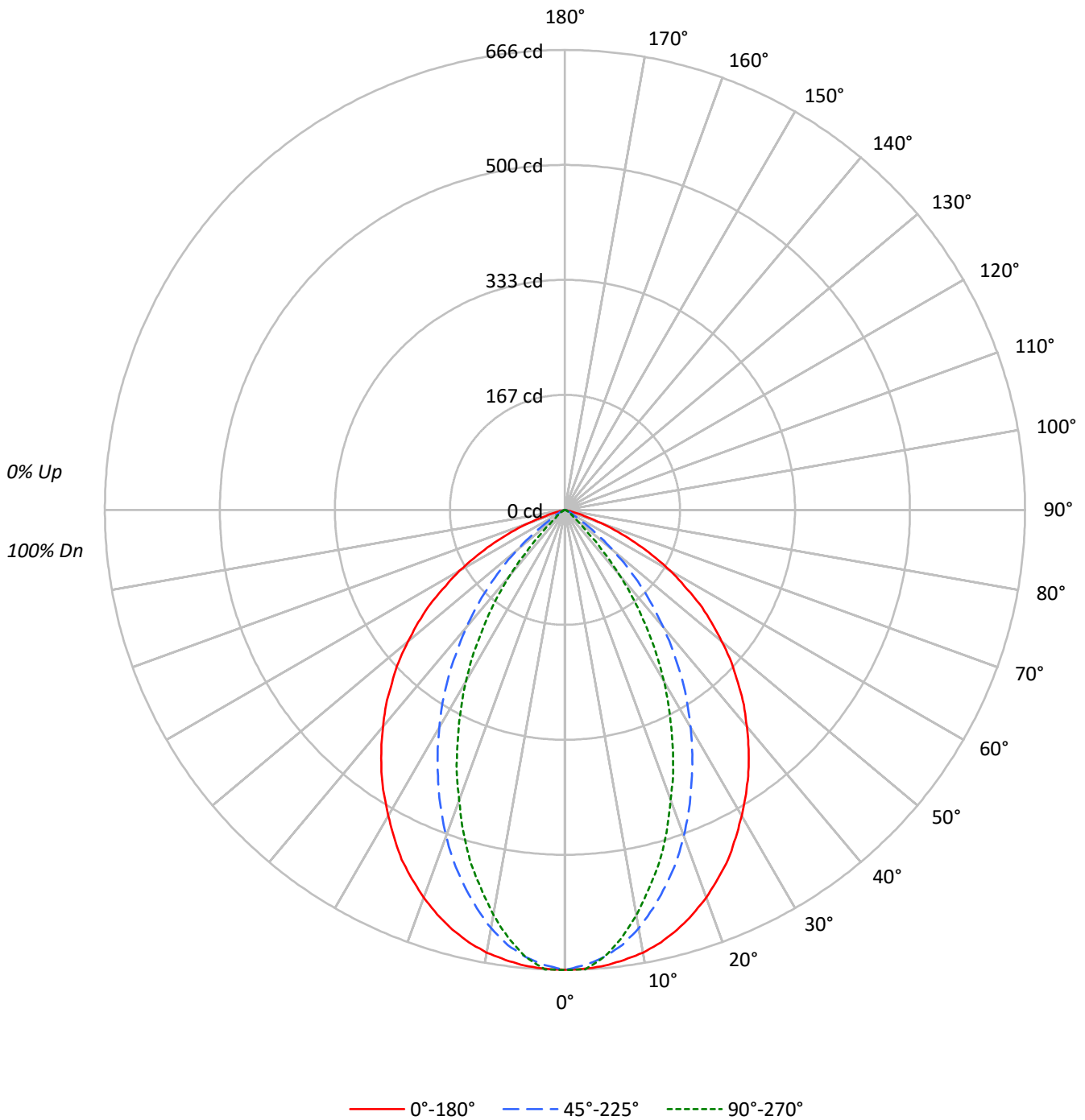
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 860.6 lumens  
Efficiency: N/A  
Efficacy: 36.6 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): 23.5  
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	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°	4586	4586	4586
5°	4580	4495	4495
10°	4553	4301	4166
15°	4485	4015	3765
20°	4379	3683	3277
25°	4246	3298	2790
30°	4067	2892	2278
35°	3893	2467	1706
40°	3681	1991	1106
45°	3449	1506	479
50°	3173	960	179
55°	2859	423	126
60°	2421	182	85
65°	1833	114	42
70°	1115	52	18
75°	234	24	24
80°	0	0	0
85°	0	0	0

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 3449 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	61.4	7.1
10°-20°	160.1	18.6
20°-30°	205.5	23.9
30°-40°	193.5	22.5
40°-50°	135.3	15.7
50°-60°	72.3	8.4
60°-70°	28.8	3.4
70°-80°	3.7	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°	427.0	49.6
0°-40°	620.5	72.1
0°-60°	828.0	96.2
0°-90°	860.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	860.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	666	666	666	666	666	
5°	663	661	650	652	650	63
15°	629	609	563	537	528	177
25°	559	510	434	387	367	257
35°	463	389	294	227	203	289
45°	354	265	155	75	49	273
55°	238	146	35	12	10	211
65°	112	45	7	4	3	112
75°	9	3	1	1	1	17
85°	0	0	0	0	0	0
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	666.1	666.1	666.1	666.1	666.1
2.5°	665.3	666.1	660.0	665.3	666.1
5°	662.6	660.9	650.3	652.1	650.3
7.5°	657.4	653.0	635.4	629.2	625.7
10°	651.2	641.5	615.2	602.0	595.8
12.5°	641.5	627.5	590.6	570.4	561.6
15°	629.2	609.0	563.3	537.0	528.2
17.5°	614.3	587.9	535.2	502.7	489.5
20°	597.6	562.4	502.7	464.0	447.3
22.5°	578.3	537.8	469.3	426.2	409.5
25°	558.9	509.7	434.1	386.7	367.3
27.5°	535.2	480.7	399.0	348.0	326.9
30°	511.5	451.7	363.8	308.5	286.5
32.5°	487.7	421.0	328.7	267.2	245.2
35°	463.1	389.3	293.5	226.7	203.0
37.5°	436.8	357.7	255.7	188.1	163.5
40°	409.5	326.9	221.5	150.3	123.0
42.5°	383.2	296.2	187.2	113.4	83.5
45°	354.2	265.4	154.7	74.7	49.2
47.5°	326.9	235.5	121.3	43.1	25.5
50°	296.2	204.8	89.6	22.8	16.7
52.5°	267.2	174.9	59.8	14.9	13.2
55°	238.2	145.9	35.2	12.3	10.5
57.5°	204.8	117.8	19.3	9.7	7.9
60°	175.8	92.3	13.2	7.0	6.2
62.5°	142.4	67.7	9.7	5.3	4.4
65°	112.5	44.8	7.0	3.5	2.6
67.5°	83.5	26.4	4.4	1.8	1.8
70°	55.4	14.1	2.6	0.9	0.9
72.5°	29.0	6.2	1.8	0.9	0.9
75°	8.8	2.6	0.9	0.9	0.9
77.5°	0.0	0.9	0.0	0.0	0.9
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



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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	14.24	15.50	14.60	15.81	16.13	0.00	0.00	0.00	0.00	0.00
	3H	14.82	15.93	15.20	16.27	16.63	0.00	0.00	0.00	0.00	0.00
	4H	14.79	15.82	15.19	16.17	16.55	0.00	0.00	0.00	0.00	0.00
	6H	14.70	15.65	15.12	16.02	16.41	0.00	0.00	0.00	0.00	0.00
	8H	14.65	15.55	15.09	15.94	16.34	0.00	0.00	0.00	0.00	0.00
	12H	14.61	15.46	15.04	15.84	16.27	0.00	0.00	0.00	0.00	0.00
4H	2H	14.01	15.04	14.41	15.39	15.78	0.00	0.00	0.00	0.00	0.00
	3H	14.60	15.44	15.02	15.84	16.25	0.00	0.00	0.00	0.00	0.00
	4H	14.55	15.29	14.99	15.72	16.16	0.00	0.00	0.00	0.00	0.00
	6H	14.47	15.10	14.93	15.55	16.02	0.00	0.00	0.00	0.00	0.00
	8H	14.41	15.00	14.88	15.45	15.92	0.00	0.00	0.00	0.00	0.00
	12H	14.35	14.88	14.84	15.36	15.84	0.00	0.00	0.00	0.00	0.00
8H	4H	14.41	15.00	14.88	15.45	15.92	0.00	0.00	0.00	0.00	0.00
	6H	14.30	14.78	14.80	15.28	15.76	0.00	0.00	0.00	0.00	0.00
	8H	14.23	14.66	14.76	15.18	15.67	0.00	0.00	0.00	0.00	0.00
	12H	14.18	14.56	14.70	15.06	15.63	0.00	0.00	0.00	0.00	0.00
12H	4H	14.35	14.88	14.84	15.36	15.84	0.00	0.00	0.00	0.00	0.00
	6H	14.23	14.66	14.76	15.18	15.67	0.00	0.00	0.00	0.00	0.00
	8H	14.18	14.56	14.70	15.06	15.63	0.00	0.00	0.00	0.00	0.00