

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: P1062196

Luminaire Tested: S125RDR-H850D850-X4F0-XX-UDD-WVL-B

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1062196  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2406-143-46)  
Test Lab: INNOVATION CENTER  
Issue Date: 8/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S125RDR-H850D850-X4F0-XX-UDD-WVL-B  
Description: DEFINE 5 BLACK REGRESSED DIRECT RECESSED HOUSING WITH WHITE STRAIGHT BLADE  
LOUVER WITH DIFFUSER  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 5000K CCT, 80 CRI LEDS  
Ballast/Driver: -

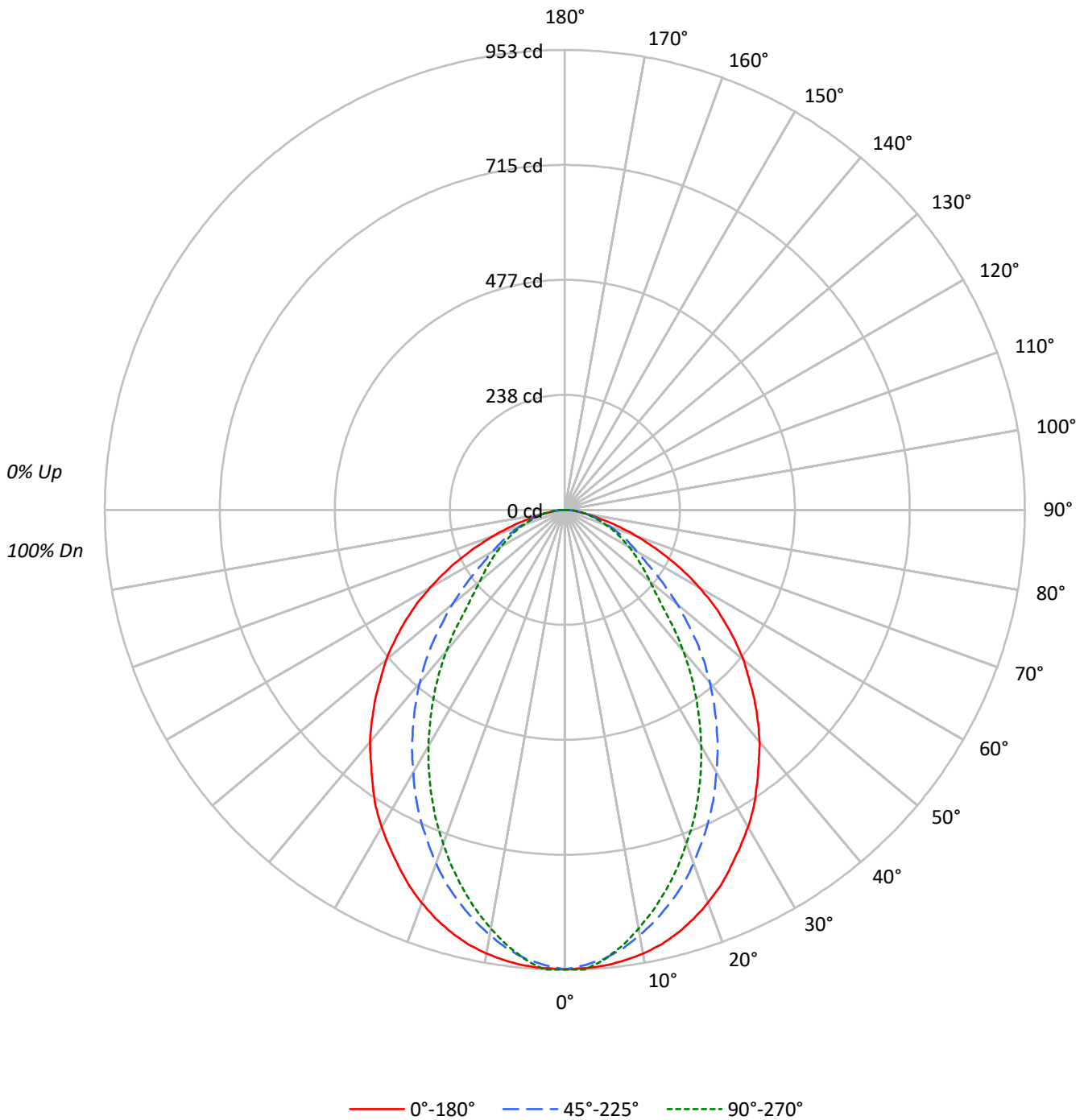
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1804.1 lumens  
Efficiency: N/A  
Efficacy: 76.8 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 0.95 / 1.11  
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										
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	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	100	100	100	100	100	100														
1	110	106	102	99	108	104	100	97	100	97	94	96	93	91	92	90	89	87	87	87	87	87	87	87														
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	80	77	75	75	75	75	75	75	75														
3	93	84	77	71	91	82	76	70	80	74	69	77	72	68	74	70	67	65	65	65	65	65	65	65														
4	86	75	68	61	84	74	67	61	72	65	60	70	64	59	67	63	59	57	57	57	57	57	57	57														
5	80	68	60	54	78	67	59	54	65	58	53	63	57	53	61	56	52	50	50	50	50	50	50	50														
6	74	62	54	48	73	61	53	48	59	53	47	58	52	47	56	51	47	45	45	45	45	45	45	45														
7	69	57	49	43	68	56	48	43	55	48	43	53	47	42	52	46	42	40	40	40	40	40	40	40														
8	65	52	44	39	63	52	44	39	50	43	39	49	43	38	48	42	38	36	36	36	36	36	36	36														
9	61	48	41	35	60	48	40	35	47	40	35	46	39	35	45	39	35	33	33	33	33	33	33	33														
10	57	45	37	32	56	44	37	32	43	37	32	42	36	32	42	36	32	30	30	30	30	30	30	30														

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

	0°	45°	90°
0°	6558	6558	6558
5°	6554	6454	6468
10°	6529	6254	6159
15°	6464	6008	5801
20°	6349	5713	5394
25°	6190	5373	4965
30°	6034	4990	4489
35°	5832	4606	3981
40°	5642	4201	3430
45°	5407	3756	2809
50°	5173	3256	2459
55°	4853	2719	2271
60°	4429	2378	2122
65°	3874	2173	1971
70°	3142	1957	1832
75°	2256	1788	1705
80°	1558	1598	1598
85°	1145	1390	1469

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 5407 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	88.5	4.9
10°-20°	239.5	13.3
20°-30°	331.0	18.3
30°-40°	352.6	19.5
40°-50°	309.7	17.2
50°-60°	234.9	13.0
60°-70°	152.5	8.5
70°-80°	75.6	4.2
80°-90°	19.8	1.1
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°	659.1	36.5
0°-40°	1011.7	56.1
0°-60°	1556.3	86.3
0°-90°	1804.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1804.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	952	952	952	952	952	
5°	948	946	934	937	936	90
15°	907	886	843	823	814	255
25°	815	770	707	671	654	375
35°	694	630	548	498	474	434
45°	555	478	386	316	288	428
55°	404	325	226	195	189	361
65°	238	177	133	123	121	235
75°	85	74	67	65	64	95
85°	14	16	18	18	19	18
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	952.4	952.4	952.4	952.4	952.4
2.5°	950.3	952.4	944.1	951.3	953.4
5°	948.2	946.2	933.8	936.9	935.8
7.5°	942.0	937.9	917.2	915.1	911.0
10°	933.8	923.4	894.5	887.2	881.0
12.5°	922.4	905.8	870.7	856.2	849.0
15°	906.9	886.2	842.8	823.1	813.8
17.5°	888.3	859.3	813.8	786.9	776.6
20°	866.5	832.4	779.7	748.7	736.2
22.5°	842.8	802.4	743.5	710.4	697.0
25°	814.8	770.4	707.3	671.1	653.5
27.5°	786.9	737.3	669.0	628.7	610.1
30°	759.0	702.1	627.7	584.2	564.6
32.5°	729.0	665.9	589.4	541.8	519.1
35°	693.9	629.7	548.0	498.4	473.6
37.5°	659.7	591.5	507.7	451.9	428.1
40°	627.7	555.3	467.4	406.4	381.6
42.5°	591.5	517.0	427.1	363.0	335.0
45°	555.3	477.7	385.7	316.4	288.5
47.5°	517.0	440.5	342.3	274.0	255.4
50°	482.9	402.2	304.0	242.0	229.6
52.5°	443.6	365.0	264.7	217.2	208.9
55°	404.3	324.7	226.5	195.4	189.2
57.5°	364.0	288.5	196.5	176.8	170.6
60°	321.6	251.3	172.7	157.2	154.1
62.5°	279.2	213.0	152.0	140.6	136.5
65°	237.8	176.8	133.4	123.1	121.0
67.5°	195.4	143.7	114.8	107.5	106.5
70°	156.1	116.8	97.2	93.1	91.0
72.5°	120.0	93.1	81.7	78.6	77.6
75°	84.8	74.5	67.2	65.1	64.1
77.5°	56.9	56.9	53.8	51.7	52.7
80°	39.3	41.4	40.3	40.3	40.3
82.5°	25.9	27.9	29.0	29.0	29.0
85°	14.5	16.5	17.6	17.6	18.6
87.5°	5.2	6.2	7.2	8.3	8.3
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	17.09	18.58	17.45	18.89	19.21	13.33	14.82	13.69	15.13	15.45
	3H	18.40	19.73	18.78	20.06	20.42	14.91	16.25	15.29	16.58	16.94
	4H	18.77	20.02	19.17	20.37	20.75	15.51	16.77	15.91	17.12	17.49
	6H	18.94	20.10	19.36	20.47	20.86	15.98	17.14	16.40	17.51	17.90
	8H	18.98	20.08	19.41	20.47	20.87	16.15	17.25	16.57	17.64	18.04
	12H	18.99	20.05	19.42	20.43	20.86	16.26	17.31	16.69	17.69	18.12
4H	2H	17.20	18.45	17.60	18.80	19.18	13.99	15.24	14.39	15.59	15.97
	3H	18.69	19.72	19.10	20.12	20.53	15.77	16.81	16.18	17.21	17.61
	4H	19.16	20.09	19.59	20.51	20.95	16.49	17.42	16.92	17.84	18.28
	6H	19.45	20.26	19.91	20.70	21.16	17.08	17.89	17.54	18.33	18.79
	8H	19.52	20.27	19.98	20.72	21.19	17.28	18.04	17.75	18.48	18.95
	12H	19.56	20.23	20.04	20.71	21.18	17.44	18.11	17.92	18.59	19.06
8H	4H	19.24	20.00	19.71	20.45	20.91	16.80	17.56	17.26	18.00	18.47
	6H	19.61	20.23	20.11	20.72	21.20	17.51	18.13	18.00	18.62	19.10
	8H	19.72	20.28	20.24	20.80	21.28	17.79	18.35	18.30	18.86	19.35
	12H	19.81	20.31	20.32	20.80	21.36	18.02	18.51	18.53	19.00	19.57
12H	4H	19.24	19.91	19.72	20.39	20.86	16.83	17.50	17.31	17.98	18.45
	6H	19.61	20.17	20.13	20.68	21.17	17.56	18.12	18.07	18.63	19.12
	8H	19.77	20.27	20.28	20.76	21.32	17.89	18.39	18.40	18.88	19.45