

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: P1058278

Luminaire Tested: S122RDR-H290D830-X4F0-XX-UDD-SVL-B

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1058278  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2406-143-20)  
Test Lab: INNOVATION CENTER  
Issue Date: 8/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S122RDR-H290D830-X4F0-XX-UDD-SVL-B  
Description: DEFINE 2 BLACK REGRESSED DIRECT RECESSED HOUSING WITH SILVER STRAIGHT BLADE LOUVER WITH DIFFUSER  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 3000K CCT, 80 CRI LEDS  
Ballast/Driver: -

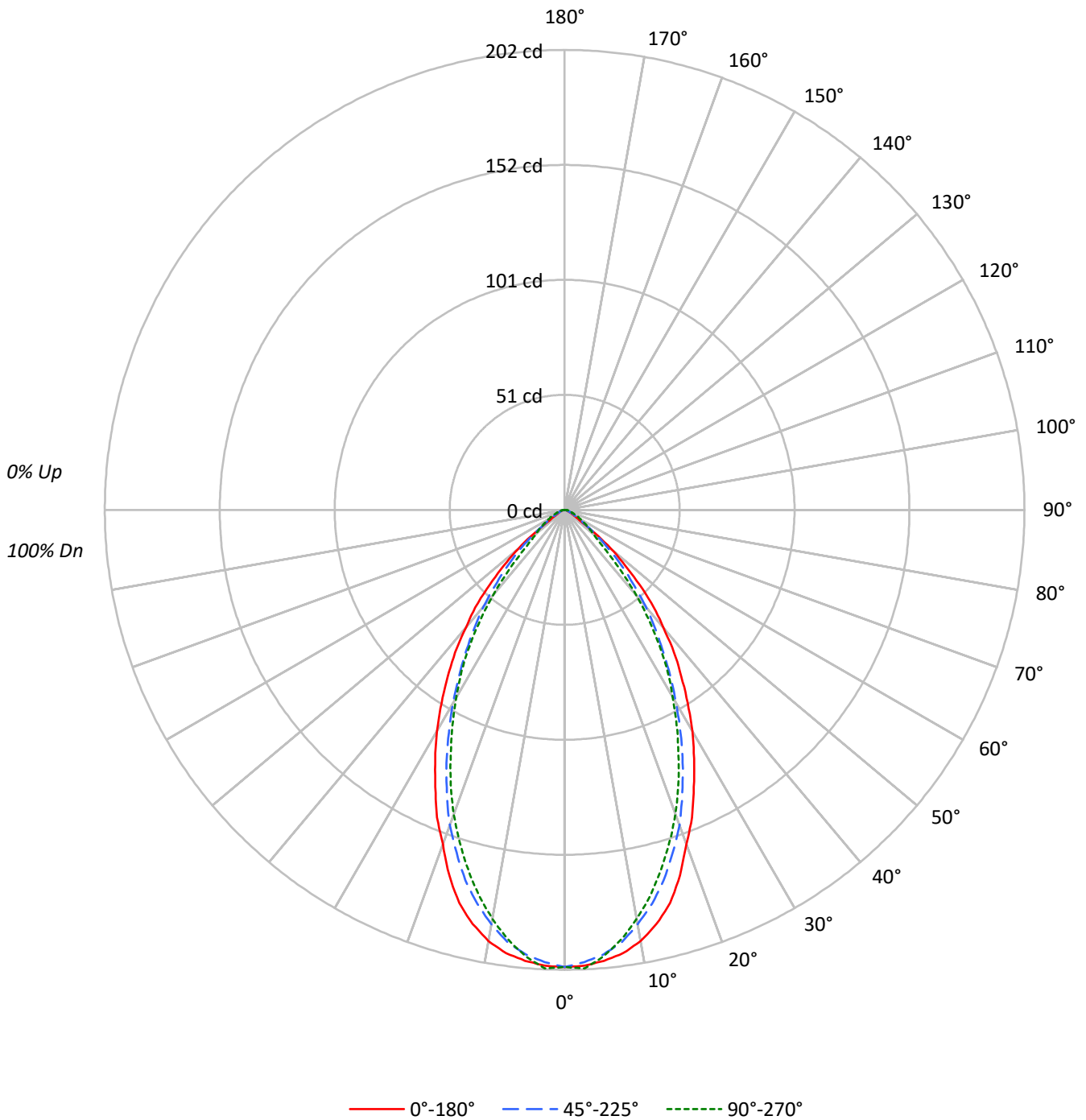
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 216.0 lumens  
Efficiency: N/A  
Efficacy: 18.5 lumens/watt  
Spacing Criteria (0/90/45): 0.93 / 0.85 / 0.91  
Luminous Opening: Rectangular (W 0.15' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 11.7  
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	113	110	107	104	110	107	105	103	103	101	99	100	98	96	96	95	94	92
2	106	101	96	92	104	99	95	91	96	92	89	93	90	87	90	87	85	84
3	100	93	87	82	98	91	86	82	88	84	80	86	82	79	84	81	78	76
4	94	85	79	74	92	84	78	74	82	77	73	80	76	72	78	74	71	70
5	88	79	72	68	87	78	72	67	76	71	67	74	70	66	73	69	65	64
6	83	73	67	62	82	72	66	62	71	65	61	69	64	61	68	64	60	59
7	79	68	62	57	77	68	61	57	66	60	56	65	60	56	64	59	56	54
8	74	64	57	53	73	63	57	52	62	56	52	61	56	52	60	55	52	50
9	70	60	53	49	69	59	53	49	58	52	48	57	52	48	56	52	48	47
10	67	56	50	45	66	56	49	45	55	49	45	54	49	45	53	48	45	44

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

	0°	45°	90°
0°	3705	3705	3705
5°	3682	3630	3645
10°	3605	3463	3418
15°	3416	3217	3125
20°	3069	2896	2794
25°	2734	2498	2409
30°	2391	2084	2024
35°	2014	1689	1635
40°	1621	1332	1178
45°	1213	963	702
50°	761	620	459
55°	257	335	373
60°	148	207	295
65°	105	140	227
70°	86	108	173
75°	57	86	143
80°	43	85	128
85°	0	0	85

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 1213 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	18.5	8.6
10°-20°	47.4	21.9
20°-30°	57.1	26.4
30°-40°	48.7	22.6
40°-50°	28.6	13.2
50°-60°	10.3	4.8
60°-70°	3.7	1.7
70°-80°	1.5	0.7
80°-90°	0.3	0.1
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°	123.0	56.9
0°-40°	171.7	79.5
0°-60°	210.6	97.5
0°-90°	216.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	216.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	201	201	201	201	201	
5°	199	199	196	197	197	19
15°	179	176	168	165	164	50
25°	134	129	123	121	118	62
35°	89	83	75	74	73	56
45°	46	42	37	31	27	36
55°	8	11	10	11	12	10
65°	2	3	3	4	5	3
75°	1	1	1	2	2	1
85°	0	0	0	0	0	0
90°	0	0	0	0	0	0



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	200.8	200.8	200.8	200.8	200.8
2.5°	200.4	200.8	198.8	200.8	201.6
5°	198.8	199.2	196.0	196.8	196.8
7.5°	196.4	196.0	191.6	190.8	190.4
10°	192.4	191.2	184.8	183.6	182.4
12.5°	186.4	184.0	177.2	175.2	173.6
15°	178.8	176.0	168.4	165.2	163.6
17.5°	168.4	165.2	157.9	154.7	153.1
20°	156.3	153.1	147.5	143.9	142.3
22.5°	146.3	141.1	135.1	132.7	130.7
25°	134.3	128.7	122.7	120.7	118.3
27.5°	123.1	116.3	110.2	108.6	106.6
30°	112.2	105.0	97.8	97.8	95.0
32.5°	100.6	93.8	86.2	85.8	84.2
35°	89.4	82.6	75.0	74.2	72.6
37.5°	79.0	72.2	64.9	62.5	60.5
40°	67.3	61.3	55.3	51.3	48.9
42.5°	58.1	51.3	45.3	40.5	37.3
45°	46.5	41.7	36.9	30.9	26.9
47.5°	36.1	32.9	28.9	22.0	20.0
50°	26.5	24.9	21.6	16.4	16.0
52.5°	16.8	17.6	15.6	12.8	14.0
55°	8.0	11.2	10.4	10.8	11.6
57.5°	5.2	5.6	7.6	8.8	9.6
60°	4.0	4.0	5.6	7.2	8.0
62.5°	3.2	3.2	4.4	6.0	6.4
65°	2.4	2.8	3.2	4.4	5.2
67.5°	2.0	2.0	2.4	3.6	4.0
70°	1.6	1.6	2.0	2.8	3.2
72.5°	1.2	1.2	1.6	2.4	2.4
75°	0.8	1.2	1.2	1.6	2.0
77.5°	0.8	0.8	0.8	1.2	1.6
80°	0.4	0.4	0.8	0.8	1.2
82.5°	0.4	0.4	0.4	0.4	0.8
85°	0.0	0.0	0.0	0.4	0.4
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	0.42	1.58	0.79	1.89	2.21	3.82	4.98	4.18	5.29	5.61
	3H	0.94	1.96	1.32	2.29	2.66	4.55	5.57	4.93	5.90	6.27
	4H	1.07	2.02	1.48	2.37	2.76	4.76	5.71	5.17	6.06	6.45
	6H	1.15	2.02	1.57	2.39	2.78	4.91	5.78	5.33	6.15	6.55
	8H	1.15	1.97	1.59	2.36	2.77	4.94	5.76	5.38	6.15	6.56
	12H	1.12	1.90	1.55	2.28	2.71	4.94	5.72	5.38	6.11	6.54
4H	2H	0.73	1.68	1.13	2.03	2.42	3.78	4.73	4.19	5.08	5.47
	3H	1.39	2.16	1.80	2.56	2.97	4.66	5.43	5.07	5.83	6.24
	4H	1.63	2.31	2.07	2.73	3.18	4.94	5.62	5.38	6.05	6.49
	6H	1.75	2.33	2.22	2.78	3.25	5.16	5.75	5.63	6.20	6.67
	8H	1.76	2.31	2.24	2.76	3.23	5.21	5.76	5.68	6.20	6.68
	12H	1.73	2.21	2.22	2.69	3.17	5.23	5.71	5.72	6.19	6.67
8H	4H	1.74	2.28	2.21	2.73	3.20	4.87	5.42	5.34	5.86	6.34
	6H	1.90	2.34	2.41	2.84	3.33	5.13	5.57	5.64	6.07	6.56
	8H	1.95	2.34	2.48	2.86	3.36	5.19	5.59	5.72	6.11	6.60
	12H	1.92	2.27	2.44	2.77	3.34	5.25	5.60	5.77	6.10	6.67
12H	4H	1.72	2.20	2.21	2.68	3.16	4.82	5.30	5.31	5.79	6.26
	6H	1.90	2.30	2.43	2.82	3.31	5.08	5.48	5.61	5.99	6.49
	8H	1.97	2.32	2.49	2.82	3.39	5.17	5.51	5.68	6.01	6.59