

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: P1058299

Luminaire Tested: S122RDR-H290D840-X4F0-XX-UDD-WVL-B

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1058299  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2406-143-19)  
Test Lab: INNOVATION CENTER  
Issue Date: 8/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S122RDR-H290D840-X4F0-XX-UDD-WVL-B  
Description: DEFINE 2 BLACK REGRESSED DIRECT RECESSED HOUSING WITH WHITE STRAIGHT BLADE  
LOUVER WITH DIFFUSER  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 4000K CCT, 80 CRI LEDS  
Ballast/Driver: -

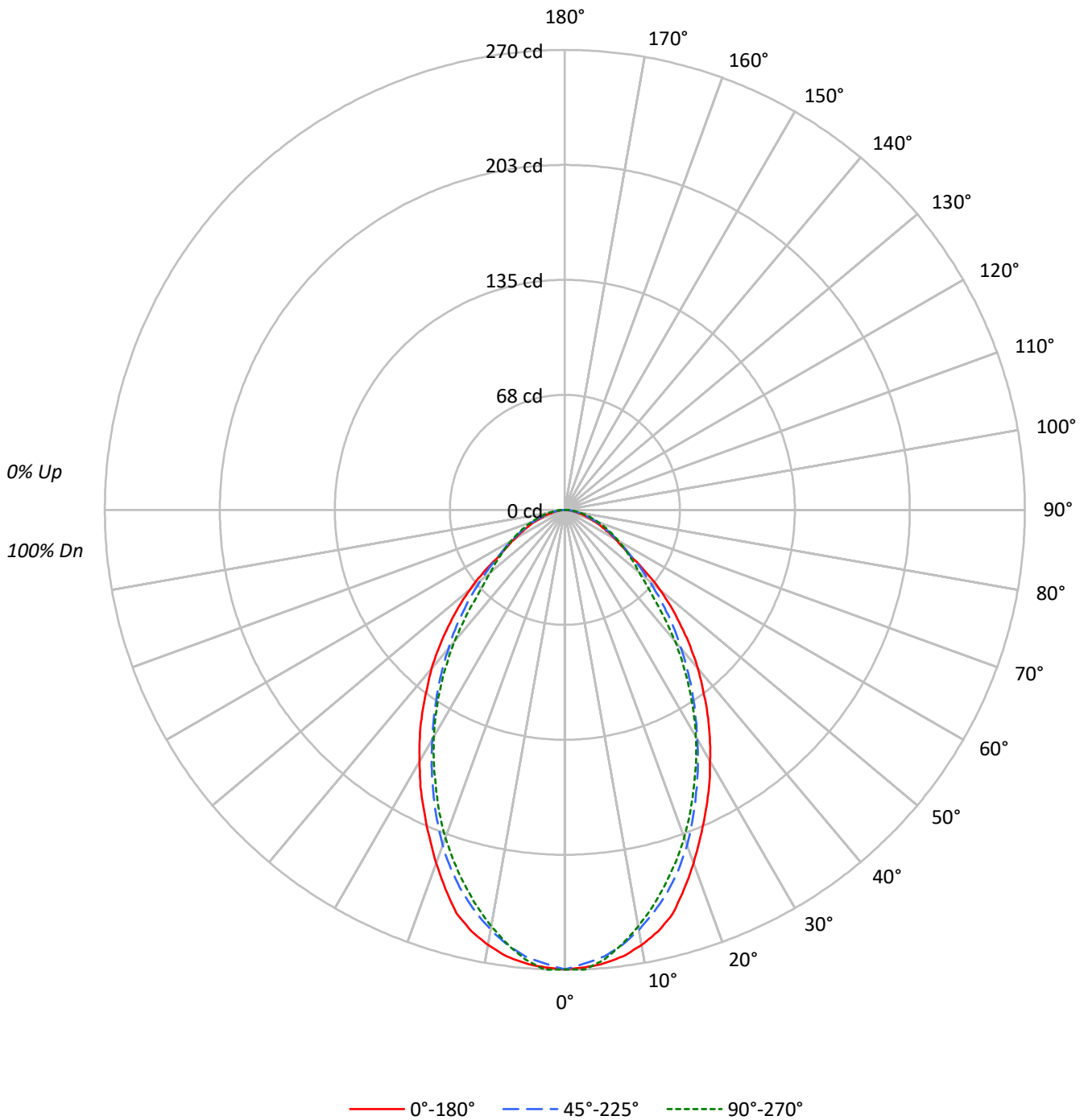
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 409.7 lumens  
Efficiency: N/A  
Efficacy: 35.0 lumens/watt  
Spacing Criteria (0/90/45): 1 / 0.92 / 1.02  
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	111	107	104	101	108	105	102	99	101	98	96	97	95	93	93	92	90	88
2	103	96	91	86	100	94	89	85	91	87	83	88	84	81	85	82	79	77
3	95	87	80	74	93	85	79	74	82	77	73	80	75	71	77	73	70	68
4	89	79	71	65	87	77	70	65	75	69	64	73	68	63	71	66	63	61
5	83	72	64	58	81	71	63	58	69	62	57	67	61	57	65	60	56	54
6	77	66	58	52	75	65	57	52	63	56	52	61	56	51	60	55	51	49
7	72	60	53	47	71	60	52	47	58	52	47	57	51	47	56	50	46	44
8	68	56	48	43	66	55	48	43	54	47	43	53	47	43	52	46	42	41
9	64	52	45	40	63	51	44	39	50	44	39	49	43	39	48	43	39	37
10	60	48	41	36	59	48	41	36	47	41	36	46	40	36	45	40	36	34

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

	0°	45°	90°
0°	4978	4978	4978
5°	4949	4877	4909
10°	4860	4692	4652
15°	4686	4440	4350
20°	4336	4116	4024
25°	3978	3718	3646
30°	3633	3313	3277
35°	3289	2933	2863
40°	2929	2556	2421
45°	2521	2197	1939
50°	2084	1849	1628
55°	1506	1535	1464
60°	1251	1318	1332
65°	1070	1144	1218
70°	879	1020	1111
75°	734	856	1012
80°	553	680	914
85°	191	360	826

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 2521 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	24.9	6.1
10°-20°	65.7	16.0
20°-30°	85.0	20.7
30°-40°	83.3	20.3
40°-50°	65.6	16.0
50°-60°	43.0	10.5
60°-70°	26.2	6.4
70°-80°	13.1	3.2
80°-90°	2.8	0.7
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°	175.6	42.9
0°-40°	258.9	63.2
0°-60°	367.6	89.7
0°-90°	409.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	409.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	270	270	270	270	270	
5°	267	267	263	265	265	25
15°	245	242	232	229	228	68
25°	195	189	183	182	179	90
35°	146	138	130	130	127	91
45°	97	91	84	78	74	74
55°	47	49	48	46	46	44
65°	24	25	26	28	28	24
75°	10	11	12	14	14	11
85°	1	1	2	3	4	2
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	269.8	269.8	269.8	269.8	269.8
2.5°	268.9	269.3	266.7	269.3	270.2
5°	267.2	267.2	263.3	265.0	265.0
7.5°	264.2	263.7	257.7	257.7	257.3
10°	259.4	257.7	250.4	249.1	248.3
12.5°	253.4	250.4	241.8	239.7	238.4
15°	245.3	241.8	232.4	229.4	227.7
17.5°	233.2	229.8	221.6	218.2	216.5
20°	220.8	215.6	209.6	206.6	204.9
22.5°	207.9	201.9	196.3	194.2	192.4
25°	195.4	189.0	182.6	181.7	179.1
27.5°	183.4	175.7	169.2	168.8	166.7
30°	170.5	162.4	155.5	155.9	153.8
32.5°	158.5	150.8	142.6	143.0	140.5
35°	146.0	137.9	130.2	129.7	127.1
37.5°	133.2	125.4	118.1	116.4	113.8
40°	121.6	113.8	106.1	103.1	100.5
42.5°	109.1	102.2	95.4	90.6	87.2
45°	96.6	90.6	84.2	78.2	74.3
47.5°	84.6	79.9	74.3	67.0	64.4
50°	72.6	69.2	64.4	58.0	56.7
52.5°	60.1	58.8	55.8	51.5	51.1
55°	46.8	49.4	47.7	46.0	45.5
57.5°	39.5	39.9	41.2	40.8	40.8
60°	33.9	33.9	35.7	36.1	36.1
62.5°	28.8	29.2	30.9	31.8	31.8
65°	24.5	24.9	26.2	27.5	27.9
67.5°	20.2	21.0	22.3	23.6	24.1
70°	16.3	17.2	18.9	20.2	20.6
72.5°	13.3	13.7	15.5	16.8	17.2
75°	10.3	10.7	12.0	13.7	14.2
77.5°	7.3	8.2	9.4	10.7	11.6
80°	5.2	5.6	6.4	8.2	8.6
82.5°	3.0	3.4	4.3	5.6	6.0
85°	0.9	1.3	1.7	3.0	3.9
87.5°	0.0	0.0	0.0	0.9	1.7
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	11.69	13.09	12.06	13.40	13.72	11.88	13.27	12.24	13.59	13.90
	3H	12.82	14.07	13.20	14.40	14.76	13.34	14.58	13.72	14.91	15.28
	4H	13.18	14.34	13.58	14.69	15.07	13.88	15.04	14.28	15.39	15.78
	6H	13.36	14.43	13.78	14.80	15.19	14.29	15.36	14.71	15.73	16.13
	8H	13.39	14.41	13.82	14.80	15.20	14.42	15.44	14.85	15.83	16.23
	12H	13.37	14.35	13.81	14.73	15.16	14.50	15.48	14.94	15.86	16.29
4H	2H	12.15	13.31	12.55	13.66	14.05	12.30	13.47	12.71	13.82	14.20
	3H	13.49	14.45	13.90	14.85	15.25	13.98	14.94	14.39	15.34	15.74
	4H	13.93	14.79	14.37	15.21	15.65	14.64	15.50	15.08	15.92	16.36
	6H	14.21	14.95	14.67	15.40	15.86	15.18	15.92	15.64	16.36	16.83
	8H	14.25	14.95	14.72	15.39	15.86	15.35	16.04	15.81	16.48	16.95
	12H	14.25	14.86	14.73	15.34	15.82	15.47	16.08	15.95	16.56	17.04
8H	4H	14.15	14.84	14.61	15.29	15.76	14.79	15.48	15.26	15.93	16.40
	6H	14.50	15.07	15.00	15.56	16.04	15.42	15.99	15.92	16.48	16.96
	8H	14.57	15.08	15.09	15.60	16.09	15.66	16.17	16.17	16.68	17.17
	12H	14.59	15.04	15.10	15.54	16.10	15.84	16.29	16.35	16.79	17.35
12H	4H	14.16	14.77	14.64	15.26	15.73	14.78	15.39	15.26	15.87	16.35
	6H	14.52	15.03	15.04	15.55	16.04	15.42	15.93	15.93	16.44	16.93
	8H	14.64	15.09	15.15	15.58	16.15	15.69	16.14	16.20	16.64	17.20