

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: P1058277

Luminaire Tested: S122RDR-H290D830-X4F0-XX-UDD-BVL-W

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1058277  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-57)  
Test Lab: INNOVATION CENTER  
Issue Date: 8/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S122RDR-H290D830-X4F0-XX-UDD-BVL-W  
Description: DEFINE 2 WHITE REGRESSED DIRECT RECESSED HOUSING WITH BLACK STRAIGHT BLADE LOUVER WITH DIFFUSER  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 3000K CCT, 80 CRI LEDS  
Ballast/Driver: -

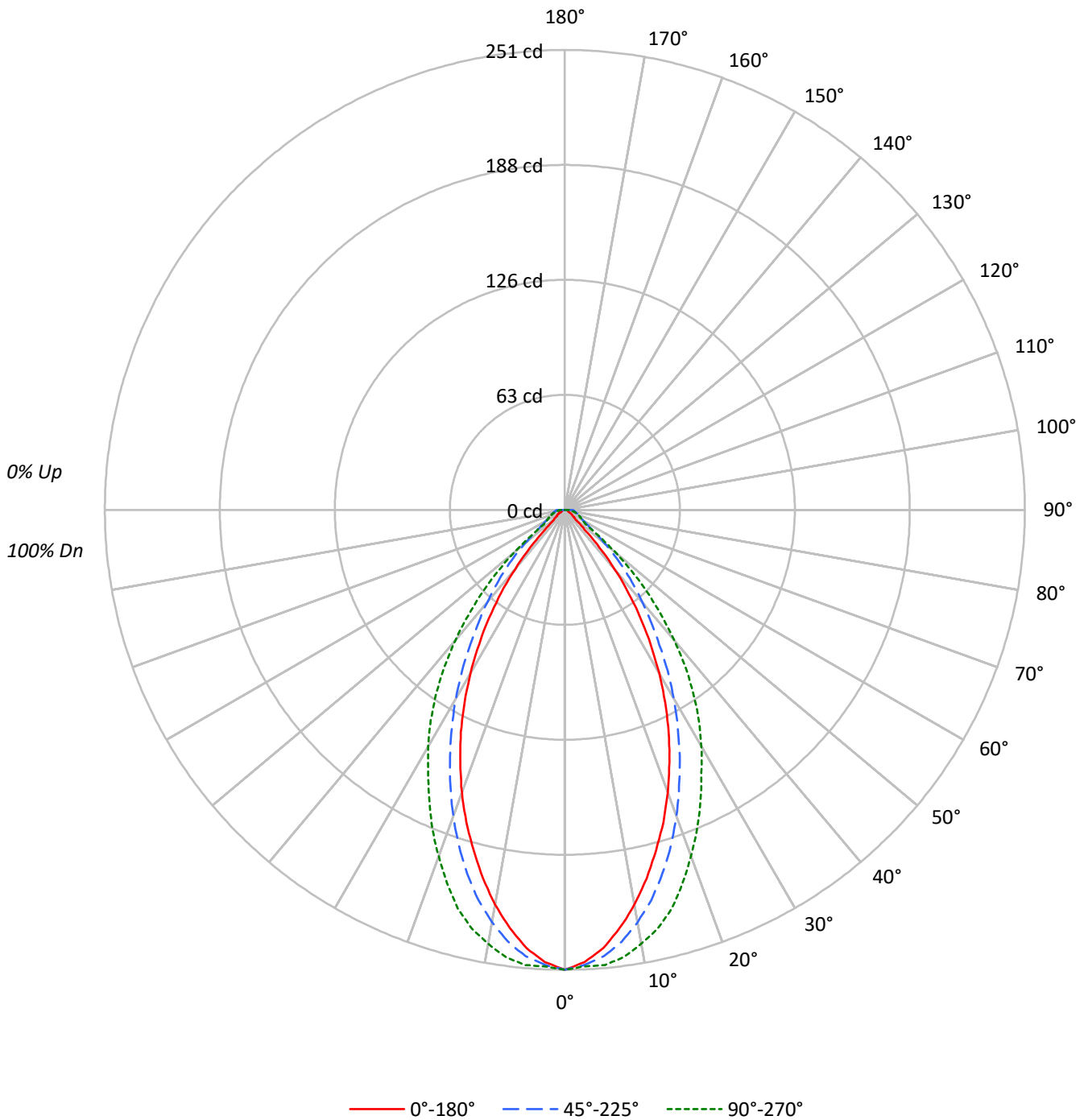
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 273.1 lumens  
Efficiency: N/A  
Efficacy: 23.3 lumens/watt  
Spacing Criteria (0/90/45): 0.78 / 0.96 / 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									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	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															
1	112	108	105	102	109	106	103	101	102	100	97	98	96	95	95	93	92	90													90															
2	105	99	94	90	102	97	92	89	94	90	87	91	87	85	88	85	83	81													81															
3	98	91	85	80	96	89	84	79	86	82	78	84	80	77	81	78	75	74													74															
4	92	83	77	72	90	82	76	71	80	75	70	78	73	70	76	72	69	67													67															
5	87	77	70	65	85	76	70	65	74	69	64	72	67	64	71	66	63	61													61															
6	82	72	65	60	80	71	64	59	69	63	59	68	62	58	66	62	58	56													56															
7	77	67	60	55	76	66	59	55	64	59	54	63	58	54	62	57	54	52													52															
8	73	62	55	51	72	62	55	51	60	54	50	59	54	50	58	53	50	48													48															
9	69	58	52	47	68	58	51	47	57	51	47	56	50	47	55	50	46	45													45															
10	66	55	48	44	64	54	48	44	53	48	44	53	47	43	52	47	43	42													42															

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

	0°	45°	90°
0°	4632	4632	4632
5°	4447	4529	4620
10°	4100	4281	4506
15°	3674	3928	4304
20°	3224	3493	3951
25°	2730	3017	3565
30°	2190	2533	3175
35°	1620	2025	2750
40°	1017	1587	2235
45°	399	1195	1654
50°	195	807	1013
55°	154	531	454
60°	118	428	413
65°	87	402	402
70°	108	410	410
75°	114	456	428
80°	170	595	468
85°	339	1016	677

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 22.5°  
 Vertical Angle: 87.5°  
 Luminance: 1861 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	22.9	8.4
10°-20°	57.9	21.2
20°-30°	69.3	25.4
30°-40°	58.3	21.4
40°-50°	33.2	12.2
50°-60°	13.1	4.8
60°-70°	8.2	3.0
70°-80°	6.1	2.2
80°-90°	3.9	1.4
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°	150.2	55.0
0°-40°	208.5	76.4
0°-60°	254.9	93.3
0°-90°	273.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	273.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	251	251	251	251	251	
5°	240	245	244	247	249	22
15°	192	199	206	218	225	54
25°	134	140	148	163	175	61
35°	72	78	90	109	122	45
45°	15	27	46	57	63	14
55°	5	10	16	17	14	4
65°	2	9	9	9	9	2
75°	2	6	6	6	6	2
85°	2	4	5	4	3	1
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	251.0	251.0	251.0	251.0	251.0
2.5°	247.0	251.4	248.6	249.0	249.4
5°	240.1	245.3	244.5	247.4	249.4
7.5°	230.1	235.7	237.7	242.5	246.2
10°	218.8	225.3	228.5	236.1	240.5
12.5°	206.0	213.2	218.0	227.7	234.1
15°	192.3	199.2	205.6	217.6	225.3
17.5°	178.7	185.5	192.3	205.6	213.6
20°	164.2	170.7	177.9	191.9	201.2
22.5°	149.0	155.8	163.0	177.5	188.7
25°	134.1	140.1	148.2	163.4	175.1
27.5°	118.5	124.5	133.3	149.0	161.4
30°	102.8	108.8	118.9	134.9	149.0
32.5°	87.1	93.6	104.4	122.1	136.1
35°	71.9	78.3	89.9	109.2	122.1
37.5°	57.0	64.2	77.1	96.0	108.0
40°	42.2	50.6	65.9	82.7	92.8
42.5°	28.1	38.5	55.4	69.5	77.9
45°	15.3	26.9	45.8	57.4	63.4
47.5°	8.4	17.3	36.5	45.8	49.4
50°	6.8	12.0	28.1	34.9	35.3
52.5°	5.6	10.8	20.9	24.9	22.9
55°	4.8	10.4	16.5	16.9	14.1
57.5°	4.0	10.0	13.7	12.0	12.0
60°	3.2	10.0	11.6	10.8	11.2
62.5°	2.4	10.0	10.4	9.6	10.0
65°	2.0	9.2	9.2	8.8	9.2
67.5°	2.0	8.4	8.4	8.0	8.4
70°	2.0	8.0	7.6	7.6	7.6
72.5°	1.6	7.2	7.2	6.8	6.8
75°	1.6	6.4	6.4	6.0	6.0
77.5°	1.6	6.0	6.0	5.6	5.2
80°	1.6	5.2	5.6	5.2	4.4
82.5°	1.6	4.8	5.2	4.8	3.6
85°	1.6	4.4	4.8	4.4	3.2
87.5°	1.2	4.4	4.4	3.6	2.4
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	2.99	4.21	3.36	4.52	4.84	5.02	6.24	5.38	6.55	6.86
	3H	4.54	5.62	4.92	5.95	6.32	6.99	8.07	7.37	8.40	8.77
	4H	5.09	6.10	5.49	6.45	6.84	7.90	8.92	8.31	9.27	9.65
	6H	5.65	6.58	6.06	6.95	7.34	8.79	9.72	9.20	10.09	10.48
	8H	5.94	6.82	6.37	7.21	7.62	9.19	10.07	9.62	10.46	10.87
	12H	6.30	7.14	6.73	7.53	7.96	9.63	10.47	10.07	10.86	11.29
4H	2H	4.18	5.19	4.58	5.54	5.93	5.64	6.65	6.04	7.00	7.38
	3H	6.38	7.21	6.79	7.62	8.02	7.88	8.71	8.29	9.12	9.52
	4H	7.43	8.18	7.87	8.60	9.04	8.95	9.70	9.39	10.12	10.56
	6H	8.33	8.97	8.79	9.42	9.89	10.06	10.71	10.53	11.16	11.63
	8H	8.71	9.32	9.18	9.77	10.24	10.59	11.19	11.06	11.64	12.11
	12H	9.13	9.67	9.62	10.15	10.63	11.16	11.70	11.65	12.18	12.66
8H	4H	8.23	8.84	8.70	9.29	9.76	9.44	10.05	9.91	10.50	10.97
	6H	9.61	10.11	10.12	10.61	11.09	10.84	11.34	11.35	11.84	12.32
	8H	10.33	10.78	10.86	11.30	11.79	11.58	12.03	12.10	12.54	13.04
	12H	11.08	11.48	11.60	11.97	12.55	12.41	12.81	12.93	13.30	13.87
12H	4H	8.40	8.93	8.88	9.41	9.89	9.54	10.08	10.03	10.56	11.04
	6H	9.95	10.39	10.47	10.91	11.40	11.06	11.50	11.58	12.02	12.51
	8H	10.86	11.25	11.38	11.75	12.32	11.94	12.34	12.46	12.83	13.41