

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: P1058280

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

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1058280  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-56)  
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-W  
Description: DEFINE 2 WHITE REGRESSED DIRECT RECESSED HOUSING WITH SILVER STRAIGHT BLADE LOUVER WITH DIFFUSER  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 3000K CCT, 80 CRI LEDS  
Ballast/Driver: -

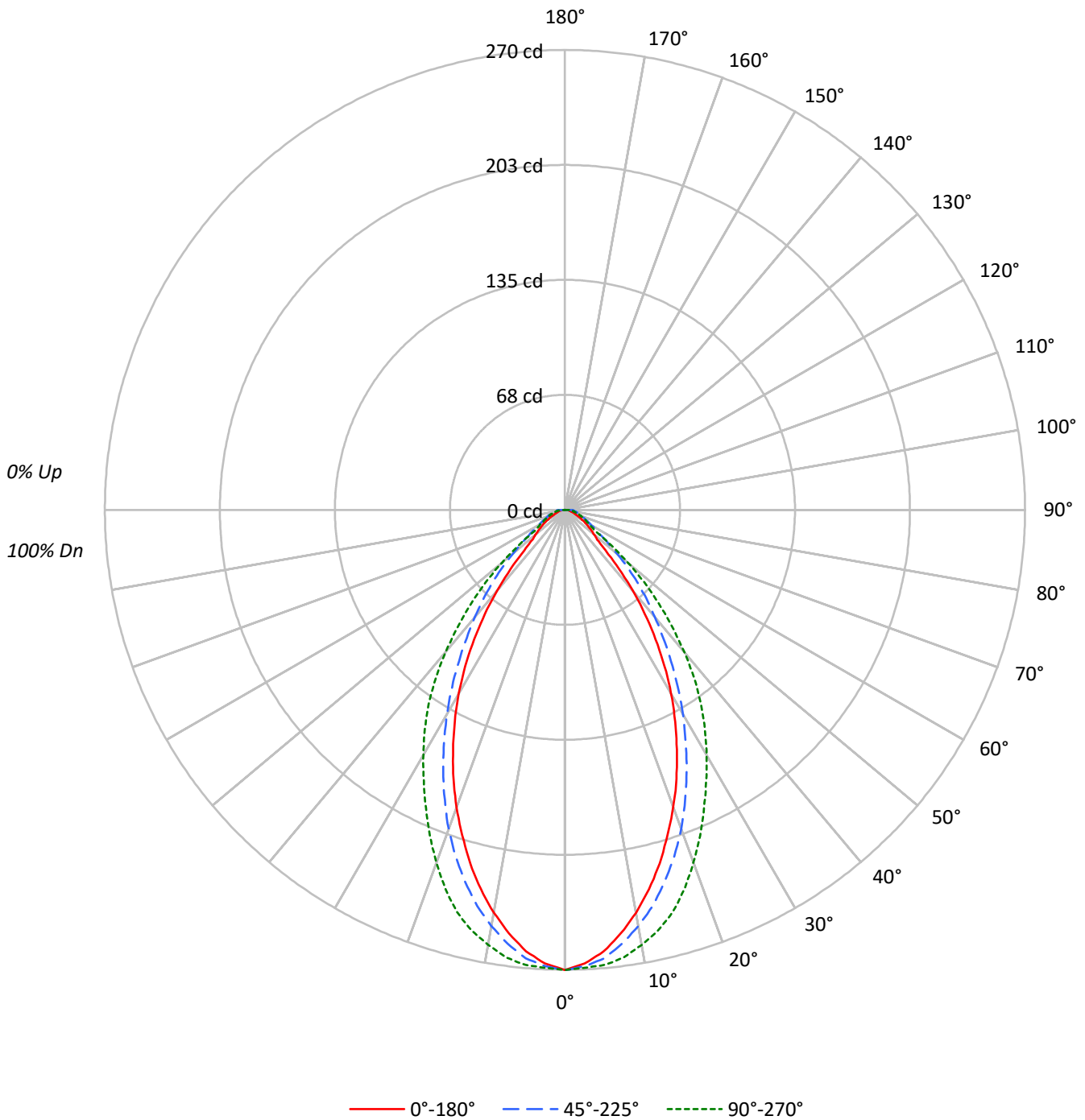
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 327.7 lumens  
Efficiency: N/A  
Efficacy: 28.0 lumens/watt  
Spacing Criteria (0/90/45): 0.83 / 0.98 / 0.95  
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	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	100	102	99	97	98	96	94	94	93	91	89				89
2	104	98	93	88	102	96	91	87	93	89	85	90	86	84	87	84	82	80				80
3	97	89	83	78	95	88	82	77	85	80	76	83	78	75	80	77	74	72				72
4	91	82	75	70	89	81	74	69	78	73	68	76	71	68	74	70	67	65				65
5	86	75	68	63	84	74	68	63	72	67	62	71	65	61	69	64	61	59				59
6	80	70	62	57	79	69	62	57	67	61	57	66	60	56	64	59	56	54				54
7	76	65	57	52	74	64	57	52	62	56	52	61	56	52	60	55	51	50				50
8	71	60	53	48	70	59	53	48	58	52	48	57	52	48	56	51	47	46				46
9	67	56	49	45	66	56	49	45	55	49	44	54	48	44	53	48	44	42				42
10	64	53	46	41	63	52	46	41	51	45	41	50	45	41	50	45	41	39				39

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

	0°	45°	90°
0°	4986	4986	4986
5°	4820	4894	4968
10°	4499	4649	4859
15°	4103	4317	4671
20°	3650	3918	4328
25°	3164	3441	3932
30°	2653	2951	3541
35°	2088	2442	3138
40°	1489	1973	2621
45°	879	1561	2033
50°	634	1128	1384
55°	531	814	698
60°	428	653	594
65°	349	576	541
70°	302	561	518
75°	285	570	513
80°	298	680	553
85°	423	1101	677

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 2033 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	24.8	7.6
10°-20°	63.7	19.4
20°-30°	78.5	24.0
30°-40°	69.9	21.3
40°-50°	44.6	13.6
50°-60°	21.4	6.5
60°-70°	12.6	3.8
70°-80°	8.0	2.4
80°-90°	4.3	1.3
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°	167.0	51.0
0°-40°	236.9	72.3
0°-60°	302.9	92.4
0°-90°	327.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	327.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	270	270	270	270	270	
5°	260	265	264	266	268	24
15°	215	220	226	236	244	60
25°	155	161	169	181	193	71
35°	93	100	108	125	139	58
45°	34	44	60	70	78	28
55°	16	21	25	24	22	15
65°	8	14	13	12	12	8
75°	4	9	8	8	7	4
85°	2	5	5	4	3	2
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	270.2	270.2	270.2	270.2	270.2
2.5°	266.6	271.0	268.2	268.2	269.0
5°	260.2	265.0	264.2	265.8	268.2
7.5°	250.9	256.1	256.9	261.4	265.0
10°	240.1	245.7	248.1	254.5	259.3
12.5°	228.0	233.7	238.1	246.1	252.9
15°	214.8	220.0	226.0	236.5	244.5
17.5°	200.3	207.2	213.2	224.0	233.3
20°	185.9	192.3	199.5	210.0	220.4
22.5°	171.0	177.0	184.3	195.1	207.2
25°	155.4	161.4	169.0	181.1	193.1
27.5°	140.1	146.1	153.4	166.6	179.5
30°	124.5	130.5	138.5	152.2	166.2
32.5°	108.8	115.2	123.3	138.1	153.0
35°	92.7	100.0	108.4	124.9	139.3
37.5°	77.1	84.3	94.7	110.8	124.5
40°	61.8	70.3	81.9	96.4	108.8
42.5°	47.0	56.2	70.7	82.3	93.1
45°	33.7	43.8	59.8	69.5	77.9
47.5°	25.7	32.9	49.4	57.0	63.0
50°	22.1	26.5	39.3	45.0	48.2
52.5°	19.3	23.3	31.3	34.1	34.1
55°	16.5	21.3	25.3	24.5	21.7
57.5°	14.1	19.3	20.9	17.7	18.5
60°	11.6	17.7	17.7	15.7	16.1
62.5°	9.6	16.5	15.3	13.6	14.1
65°	8.0	14.5	13.2	12.0	12.4
67.5°	6.4	12.8	11.6	10.8	10.8
70°	5.6	11.6	10.4	9.6	9.6
72.5°	4.8	10.0	9.2	8.4	8.4
75°	4.0	8.8	8.0	7.6	7.2
77.5°	3.6	7.6	7.2	6.4	6.0
80°	2.8	6.4	6.4	6.0	5.2
82.5°	2.4	5.6	5.6	5.2	4.4
85°	2.0	4.8	5.2	4.4	3.2
87.5°	1.6	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	7.27	8.54	7.63	8.85	9.17	7.06	8.33	7.42	8.65	8.96
	3H	8.49	9.62	8.87	9.95	10.32	8.63	9.77	9.01	10.10	10.46
	4H	8.93	9.99	9.34	10.34	10.73	9.35	10.40	9.75	10.76	11.14
	6H	9.31	10.29	9.73	10.66	11.05	9.99	10.97	10.41	11.34	11.73
	8H	9.46	10.39	9.90	10.78	11.18	10.32	11.24	10.75	11.64	12.04
	12H	9.62	10.50	10.05	10.89	11.32	10.62	11.50	11.05	11.88	12.31
4H	2H	7.81	8.87	8.21	9.22	9.60	7.64	8.70	8.05	9.05	9.44
	3H	9.49	10.36	9.90	10.77	11.17	9.47	10.34	9.88	10.74	11.15
	4H	10.28	11.06	10.72	11.48	11.93	10.34	11.12	10.77	11.54	11.98
	6H	10.92	11.60	11.39	12.05	12.51	11.18	11.85	11.64	12.30	12.77
	8H	11.17	11.80	11.64	12.25	12.72	11.60	12.23	12.07	12.68	13.15
	12H	11.42	11.98	11.90	12.46	12.93	12.00	12.56	12.49	13.04	13.52
8H	4H	10.70	11.33	11.17	11.78	12.25	10.75	11.38	11.22	11.83	12.30
	6H	11.67	12.19	12.17	12.69	13.17	11.83	12.35	12.34	12.85	13.33
	8H	12.16	12.63	12.68	13.14	13.64	12.42	12.89	12.95	13.41	13.90
	12H	12.66	13.08	13.18	13.57	14.14	13.02	13.44	13.54	13.93	14.50
12H	4H	10.76	11.32	11.25	11.81	12.28	10.83	11.39	11.31	11.87	12.34
	6H	11.84	12.31	12.36	12.82	13.31	12.00	12.46	12.52	12.98	13.47
	8H	12.47	12.89	12.99	13.38	13.95	12.71	13.12	13.22	13.62	14.19