

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: P1058291

Luminaire Tested: S122RDR-H290D835-X4F0-XX-UDD-WVL-S

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1058291  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-58)  
Test Lab: INNOVATION CENTER  
Issue Date: 8/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S122RDR-H290D835-X4F0-XX-UDD-WVL-S  
Description: DEFINE 2 SILVER REGRESSED DIRECT RECESSED HOUSING WITH WHITE STRAIGHT BLADE  
LOUVER WITH DIFFUSER  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 3500K CCT, 80 CRI LEDS  
Ballast/Driver: -

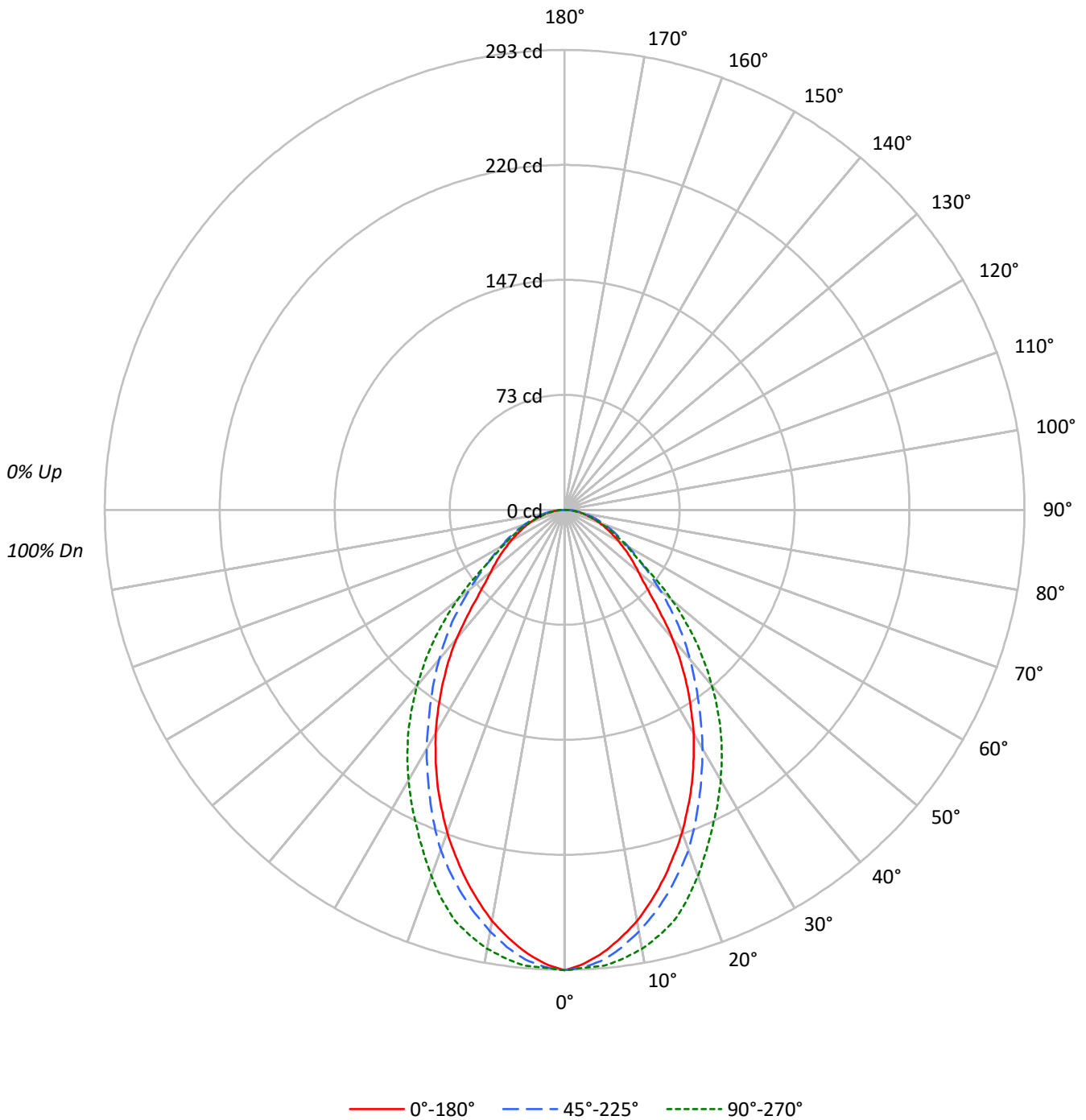
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 477.6 lumens  
Efficiency: N/A  
Efficacy: 40.8 lumens/watt  
Spacing Criteria (0/90/45): 0.91 / 1.05 / 1.05  
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	110	106	103	99	108	104	101	98	100	97	95	96	94	92	93	91	89	87
2	102	95	89	84	100	93	88	83	90	85	81	86	83	79	84	80	78	76
3	94	85	78	73	92	84	77	72	81	75	71	78	73	69	76	72	68	66
4	88	77	69	63	85	76	69	63	73	67	62	71	66	61	69	64	61	59
5	81	70	62	56	79	69	61	56	67	60	55	65	59	55	63	58	54	52
6	76	64	56	50	74	63	56	50	61	55	50	60	54	49	58	53	49	47
7	71	59	51	45	69	58	51	45	57	50	45	55	49	45	54	49	44	43
8	67	54	47	41	65	54	46	41	52	46	41	51	45	41	50	45	41	39
9	63	50	43	38	61	50	43	38	49	42	38	48	42	37	47	41	37	36
10	59	47	40	35	58	46	39	35	45	39	35	45	39	34	44	38	34	33

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

	0°	45°	90°
0°	5412	5412	5412
5°	5244	5329	5401
10°	4984	5111	5319
15°	4652	4839	5171
20°	4297	4530	4874
25°	3909	4133	4540
30°	3501	3746	4236
35°	3050	3347	3913
40°	2573	2994	3517
45°	2043	2643	3077
50°	1760	2274	2555
55°	1602	1943	1959
60°	1461	1727	1664
65°	1336	1563	1467
70°	1241	1446	1311
75°	1155	1369	1155
80°	1084	1307	1041
85°	1080	1355	910

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 3077 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	27.1	5.7
10°-20°	71.6	15.0
20°-30°	94.2	19.7
30°-40°	94.7	19.8
40°-50°	76.8	16.1
50°-60°	52.9	11.1
60°-70°	34.6	7.2
70°-80°	19.3	4.0
80°-90°	6.5	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°	192.8	40.4
0°-40°	287.5	60.2
0°-60°	417.1	87.3
0°-90°	477.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	477.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	293	293	293	293	293	
5°	283	289	288	289	292	26
15°	244	249	253	263	271	68
25°	192	197	203	212	223	88
35°	135	142	149	162	174	84
45°	78	87	101	110	118	62
55°	50	55	60	62	61	45
65°	31	37	36	34	34	31
75°	16	20	19	17	16	17
85°	5	7	6	6	4	6
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	293.3	293.3	293.3	293.3	293.3
2.5°	289.4	294.5	291.6	291.6	292.0
5°	283.1	288.6	287.7	289.0	291.6
7.5°	275.0	280.9	280.9	284.8	288.2
10°	266.0	272.0	272.8	278.8	283.9
12.5°	255.0	260.9	263.5	271.1	277.9
15°	243.5	249.4	253.3	262.6	270.7
17.5°	231.1	237.1	242.2	252.0	260.1
20°	218.8	224.3	230.7	239.2	248.2
22.5°	205.2	211.1	217.1	225.2	235.4
25°	192.0	197.1	203.0	212.0	223.0
27.5°	177.9	183.5	189.0	199.6	211.1
30°	164.3	169.8	175.8	186.9	198.8
32.5°	149.8	155.8	161.7	174.1	186.4
35°	135.4	141.7	148.6	161.7	173.7
37.5°	121.3	128.1	136.2	149.8	160.0
40°	106.8	114.1	124.3	136.2	146.0
42.5°	91.5	100.5	112.8	123.0	132.0
45°	78.3	87.3	101.3	110.2	117.9
47.5°	68.5	75.8	89.4	97.0	103.4
50°	61.3	66.8	79.2	84.7	89.0
52.5°	55.3	60.9	69.4	73.2	74.5
55°	49.8	55.3	60.4	61.7	60.9
57.5°	44.3	50.2	53.2	51.9	51.9
60°	39.6	46.0	46.8	45.1	45.1
62.5°	34.9	41.3	41.3	39.2	39.2
65°	30.6	36.6	35.8	34.1	33.6
67.5°	26.8	32.3	31.1	29.4	28.9
70°	23.0	28.1	26.8	24.7	24.3
72.5°	19.6	24.3	22.6	20.9	20.0
75°	16.2	20.0	19.2	17.0	16.2
77.5°	13.2	16.2	15.3	13.6	12.8
80°	10.2	12.8	12.3	10.6	9.8
82.5°	7.7	9.8	9.4	8.1	6.8
85°	5.1	6.8	6.4	5.5	4.3
87.5°	2.6	4.7	4.3	3.8	2.1
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	12.59	14.03	12.96	14.35	14.66	12.95	14.39	13.32	14.71	15.02
	3H	14.14	15.43	14.52	15.76	16.12	14.30	15.59	14.68	15.92	16.28
	4H	14.71	15.92	15.11	16.27	16.65	14.78	15.99	15.18	16.34	16.72
	6H	15.14	16.26	15.55	16.62	17.02	15.14	16.25	15.55	16.62	17.01
	8H	15.30	16.36	15.72	16.75	17.15	15.25	16.31	15.68	16.70	17.11
	12H	15.41	16.43	15.84	16.81	17.24	15.33	16.34	15.76	16.73	17.16
4H	2H	13.18	14.39	13.58	14.74	15.12	13.47	14.68	13.87	15.03	15.41
	3H	15.00	16.00	15.41	16.41	16.81	15.04	16.04	15.45	16.45	16.85
	4H	15.75	16.65	16.19	17.07	17.51	15.65	16.55	16.08	16.96	17.40
	6H	16.34	17.12	16.80	17.57	18.03	16.13	16.91	16.59	17.36	17.82
	8H	16.55	17.28	17.02	17.73	18.20	16.29	17.02	16.76	17.47	17.94
	12H	16.72	17.37	17.20	17.85	18.32	16.41	17.07	16.90	17.55	18.02
8H	4H	16.04	16.77	16.50	17.21	17.68	15.95	16.68	16.41	17.12	17.59
	6H	16.79	17.40	17.29	17.89	18.37	16.56	17.17	17.06	17.66	18.14
	8H	17.12	17.66	17.63	18.17	18.66	16.81	17.36	17.33	17.87	18.36
	12H	17.40	17.88	17.92	18.38	18.94	17.03	17.50	17.54	18.00	18.56
12H	4H	16.06	16.71	16.54	17.19	17.66	15.98	16.64	16.47	17.11	17.59
	6H	16.85	17.40	17.37	17.91	18.40	16.64	17.19	17.16	17.70	18.19
	8H	17.25	17.73	17.76	18.23	18.79	16.96	17.44	17.47	17.93	18.50