

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: P1058322

Luminaire Tested: S122RDR-H290D930-X4F0-XX-UDD-BVL-W

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1058322  
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-H290D930-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, 90 CRI LEDS  
Ballast/Driver: -

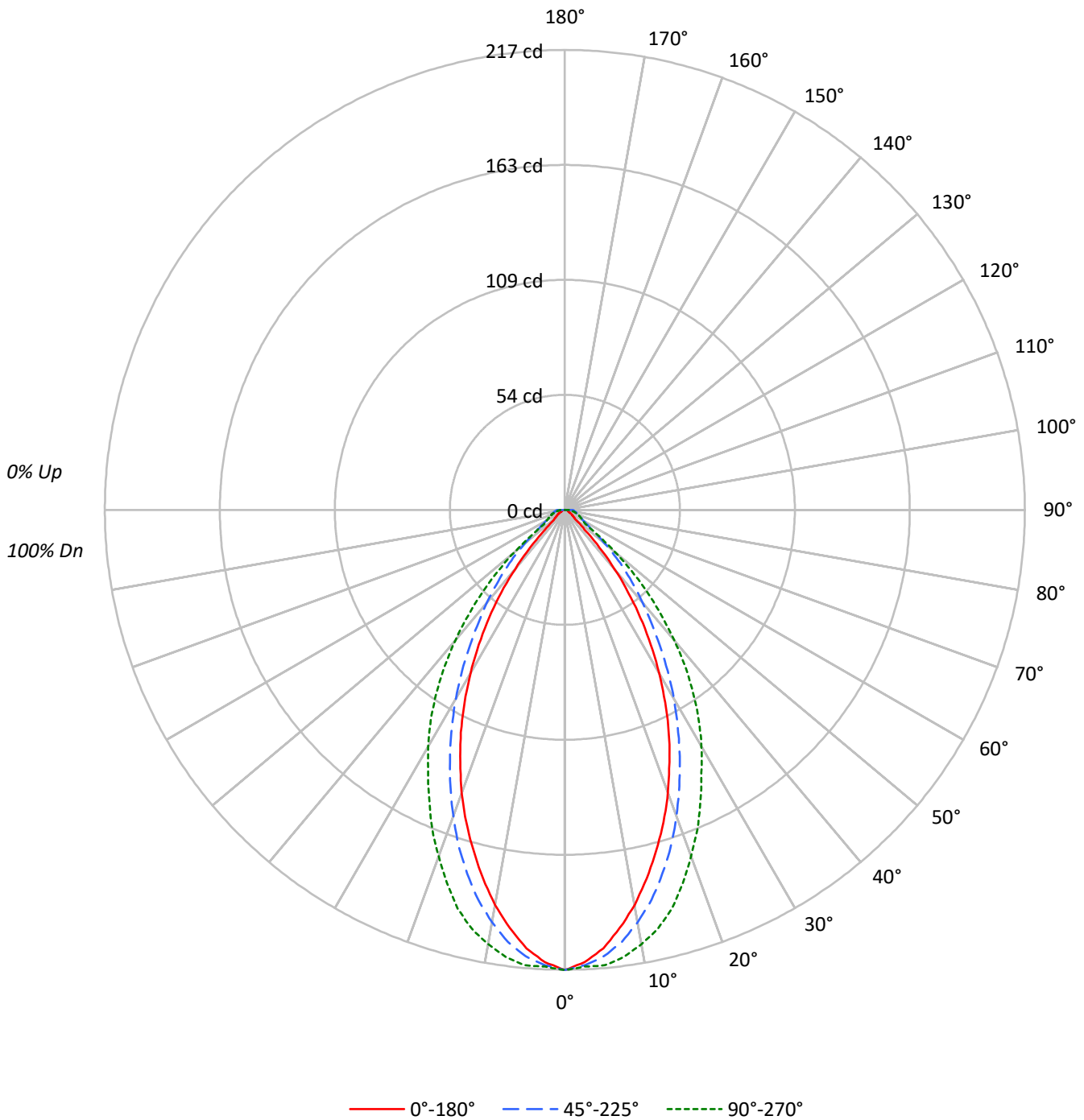
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 236.3 lumens  
Efficiency: N/A  
Efficacy: 20.2 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																												
1	112	108	105	102	109	106	103	101	102	100	97	98	96	95	95	93	92	90																												
2	105	99	94	90	102	97	92	89	94	90	87	91	87	85	88	85	83	81																												
3	98	91	85	80	96	89	84	79	86	82	78	84	80	76	81	78	75	74																												
4	92	83	77	72	90	82	76	71	80	75	70	78	73	70	76	72	69	67																												
5	87	77	70	65	85	76	70	65	74	69	64	72	67	64	71	66	63	61																												
6	82	72	65	60	80	71	64	59	69	63	59	68	62	58	66	62	58	56																												
7	77	67	60	55	76	66	59	55	64	59	54	63	58	54	62	57	54	52																												
8	73	62	55	51	72	62	55	51	60	54	50	59	54	50	58	53	50	48																												
9	69	58	52	47	68	58	51	47	57	51	47	56	50	47	55	50	46	45																												
10	66	55	48	44	64	54	48	44	53	48	44	53	47	43	52	47	43	42																												

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

	0°	45°	90°
0°	4006	4006	4006
5°	3847	3918	3995
10°	3547	3702	3899
15°	3179	3397	3723
20°	2790	3022	3417
25°	2362	2610	3083
30°	1894	2190	2746
35°	1401	1753	2379
40°	879	1373	1932
45°	344	1033	1433
50°	169	698	878
55°	135	457	392
60°	103	373	358
65°	74	349	349
70°	92	356	356
75°	100	399	371
80°	149	521	404
85°	296	889	593

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 22.5°  
 Vertical Angle: 87.5°  
 Luminance: 1608 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	19.8	8.4
10°-20°	50.1	21.2
20°-30°	60.0	25.4
30°-40°	50.5	21.4
40°-50°	28.7	12.2
50°-60°	11.3	4.8
60°-70°	7.1	3.0
70°-80°	5.3	2.2
80°-90°	3.4	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°	129.9	55.0
0°-40°	180.4	76.3
0°-60°	220.5	93.3
0°-90°	236.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	236.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	217	217	217	217	217	
5°	208	212	212	214	216	19
15°	166	172	178	188	195	46
25°	116	121	128	141	151	53
35°	62	68	78	94	106	39
45°	13	23	40	50	55	12
55°	4	9	14	15	12	4
65°	2	8	8	8	8	2
75°	1	6	6	5	5	2
85°	1	4	4	4	3	1
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	217.1	217.1	217.1	217.1	217.1
2.5°	213.6	217.4	215.0	215.4	215.7
5°	207.7	212.2	211.5	214.0	215.7
7.5°	199.0	203.9	205.6	209.8	212.9
10°	189.3	194.9	197.6	204.2	208.1
12.5°	178.2	184.4	188.6	196.9	202.5
15°	166.4	172.3	177.8	188.3	194.9
17.5°	154.6	160.5	166.4	177.8	184.8
20°	142.1	147.6	153.9	166.0	174.0
22.5°	128.9	134.8	141.0	153.5	163.3
25°	116.0	121.2	128.2	141.4	151.4
27.5°	102.5	107.7	115.3	128.9	139.6
30°	88.9	94.1	102.8	116.7	128.9
32.5°	75.4	80.9	90.3	105.6	117.7
35°	62.2	67.7	77.8	94.5	105.6
37.5°	49.3	55.6	66.7	83.0	93.4
40°	36.5	43.8	57.0	71.6	80.2
42.5°	24.3	33.3	47.9	60.1	67.4
45°	13.2	23.3	39.6	49.7	54.9
47.5°	7.3	14.9	31.6	39.6	42.7
50°	5.9	10.4	24.3	30.2	30.6
52.5°	4.9	9.4	18.1	21.5	19.8
55°	4.2	9.0	14.2	14.6	12.2
57.5°	3.5	8.7	11.8	10.4	10.4
60°	2.8	8.7	10.1	9.4	9.7
62.5°	2.1	8.7	9.0	8.3	8.7
65°	1.7	8.0	8.0	7.6	8.0
67.5°	1.7	7.3	7.3	6.9	7.3
70°	1.7	6.9	6.6	6.6	6.6
72.5°	1.4	6.3	6.3	5.9	5.9
75°	1.4	5.6	5.6	5.2	5.2
77.5°	1.4	5.2	5.2	4.9	4.5
80°	1.4	4.5	4.9	4.5	3.8
82.5°	1.4	4.2	4.5	4.2	3.1
85°	1.4	3.8	4.2	3.8	2.8
87.5°	1.0	3.8	3.8	3.1	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	2.53	3.75	2.89	4.06	4.38	4.52	5.75	4.89	6.06	6.37
	3H	4.05	5.14	4.43	5.47	5.83	6.50	7.58	6.88	7.91	8.28
	4H	4.62	5.63	5.02	5.98	6.36	7.41	8.43	7.82	8.78	9.16
	6H	5.17	6.10	5.59	6.48	6.87	8.30	9.23	8.71	9.60	9.99
	8H	5.47	6.35	5.90	6.74	7.15	8.70	9.58	9.13	9.97	10.38
	12H	5.84	6.68	6.27	7.06	7.49	9.14	9.98	9.58	10.37	10.80
4H	2H	3.71	4.72	4.12	5.08	5.46	5.15	6.16	5.55	6.51	6.90
	3H	5.90	6.73	6.31	7.14	7.54	7.40	8.23	7.81	8.63	9.04
	4H	6.97	7.71	7.40	8.13	8.58	8.47	9.21	8.90	9.63	10.08
	6H	7.86	8.50	8.32	8.95	9.42	9.58	10.22	10.04	10.67	11.14
	8H	8.25	8.85	8.72	9.30	9.77	10.10	10.70	10.57	11.15	11.62
	12H	8.67	9.20	9.16	9.69	10.16	10.68	11.21	11.16	11.70	12.17
8H	4H	7.77	8.37	8.24	8.82	9.29	8.96	9.57	9.43	10.02	10.49
	6H	9.15	9.64	9.65	10.14	10.62	10.36	10.86	10.87	11.36	11.84
	8H	9.87	10.32	10.39	10.83	11.33	11.10	11.55	11.63	12.07	12.56
	12H	10.62	11.01	11.13	11.51	12.08	11.93	12.33	12.45	12.82	13.40
12H	4H	7.93	8.47	8.42	8.95	9.42	9.06	9.60	9.55	10.08	10.56
	6H	9.48	9.92	10.00	10.44	10.93	10.58	11.03	11.10	11.54	12.04
	8H	10.40	10.79	10.91	11.29	11.86	11.47	11.86	11.98	12.36	12.93