

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: P1058338

Luminaire Tested: S122RDR-H290D940-X4F0-XX-UDD-BVL-B

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1058338  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2406-143-21)  
Test Lab: INNOVATION CENTER  
Issue Date: 8/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S122RDR-H290D940-X4F0-XX-UDD-BVL-B  
Description: DEFINE 2 BLACK REGRESSED DIRECT RECESSED HOUSING WITH BLACK STRAIGHT BLADE LOUVER WITH DIFFUSER  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 4000K CCT, 90 CRI LEDS  
Ballast/Driver: -

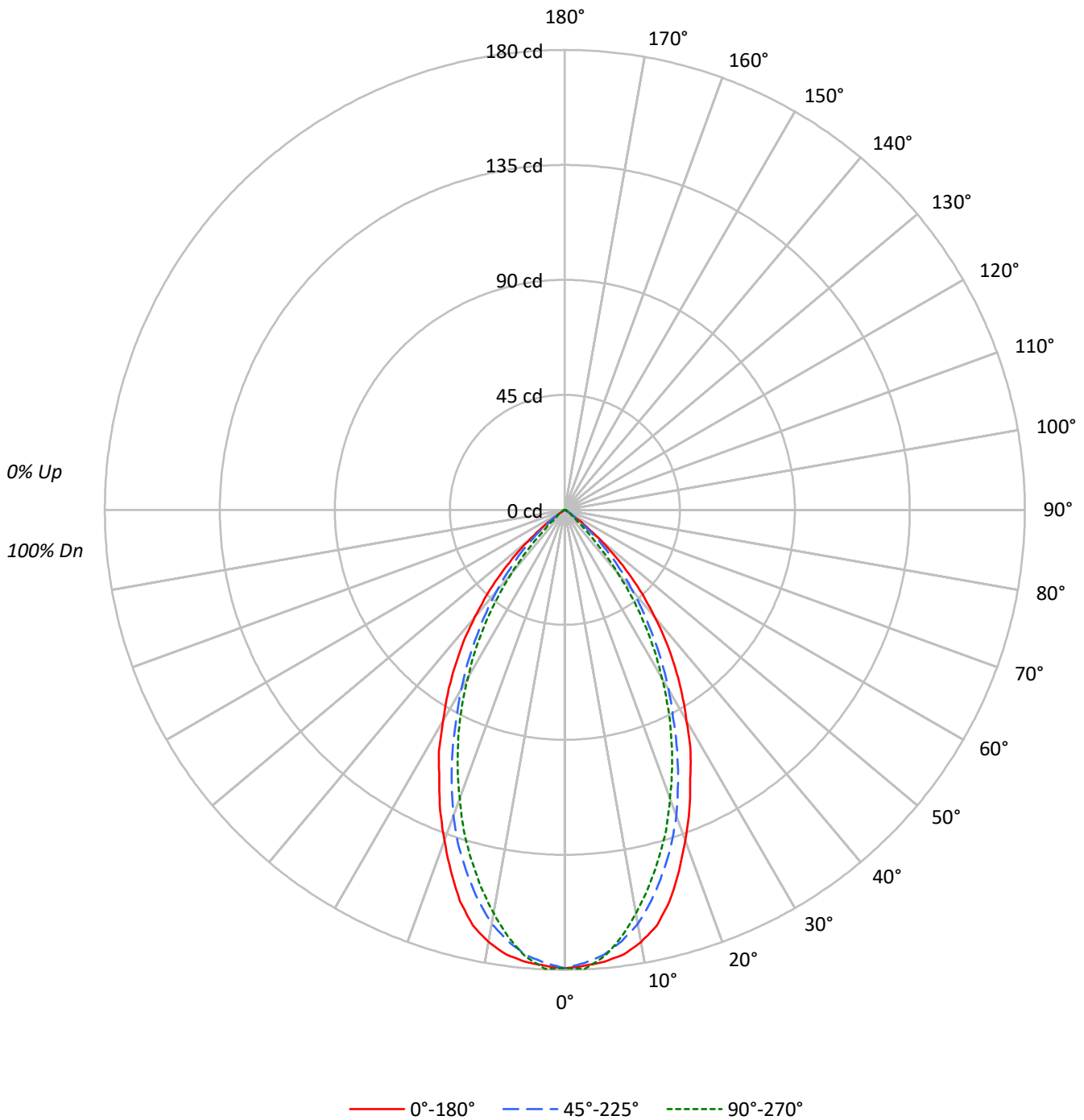
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 168.7 lumens  
Efficiency: N/A  
Efficacy: 14.4 lumens/watt  
Spacing Criteria (0/90/45): 0.91 / 0.8 / 0.88  
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	113	110	108	105	111	108	106	104	104	102	101	100	99	98	97	96	95	93
2	107	102	98	94	105	100	97	93	97	94	91	94	92	89	91	89	87	86
3	101	95	89	85	99	93	89	85	91	87	83	88	85	82	86	83	81	79
4	96	88	82	78	94	87	81	77	85	80	76	83	79	75	81	77	75	73
5	91	82	76	71	89	81	75	71	79	74	70	77	73	70	76	72	69	67
6	86	76	70	66	84	76	70	65	74	69	65	73	68	64	71	67	64	62
7	81	71	65	61	80	71	65	61	69	64	60	68	63	60	67	63	60	58
8	77	67	61	56	76	66	60	56	65	60	56	64	59	56	63	59	56	54
9	73	63	57	53	72	62	57	52	61	56	52	61	56	52	60	55	52	51
10	69	59	53	49	68	59	53	49	58	53	49	57	52	49	56	52	49	47

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

	0°	45°	90°
0°	3310	3310	3310
5°	3288	3238	3253
10°	3219	3084	3005
15°	3028	2818	2703
20°	2704	2502	2360
25°	2364	2115	2008
30°	2028	1730	1617
35°	1692	1349	1214
40°	1315	995	776
45°	921	663	337
50°	500	347	121
55°	74	122	87
60°	15	30	55
65°	0	17	35
70°	0	0	22
75°	0	0	0
80°	0	0	0
85°	0	0	0

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 921 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	16.5	9.8
10°-20°	41.5	24.6
20°-30°	48.4	28.7
30°-40°	38.8	23.0
40°-50°	19.3	11.4
50°-60°	3.8	2.3
60°-70°	0.3	0.2
70°-80°	0.0	0.0
80°-90°	0.0	0.0
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°	106.4	63.1
0°-40°	145.2	86.1
0°-60°	168.3	99.8
0°-90°	168.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	168.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	179	179	179	179	179	
5°	178	178	175	175	176	17
15°	158	156	148	144	142	44
25°	116	110	104	102	99	53
35°	75	68	60	57	54	47
45°	35	31	25	17	13	27
55°	2	5	4	2	3	5
65°	0	0	0	0	1	0
75°	0	0	0	0	0	0
85°	0	0	0	0	0	0
90°	0	0	0	0	0	0



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	179.4	179.4	179.4	179.4	179.4
2.5°	178.6	179.4	177.5	179.4	179.8
5°	177.5	177.5	174.8	175.2	175.6
7.5°	175.6	174.8	170.3	169.5	168.8
10°	171.8	170.3	164.6	161.6	160.4
12.5°	166.5	164.2	156.6	153.2	151.3
15°	158.5	155.5	147.5	143.7	141.5
17.5°	148.3	145.6	138.1	133.9	131.6
20°	137.7	133.9	127.4	123.3	120.2
22.5°	127.4	122.5	115.7	112.6	109.6
25°	116.1	110.4	103.9	101.6	98.6
27.5°	106.6	99.4	91.8	90.3	87.6
30°	95.2	88.4	81.2	78.9	75.9
32.5°	85.3	77.8	70.5	67.9	65.2
35°	75.1	67.5	59.9	57.3	53.9
37.5°	65.2	58.0	50.4	46.3	43.2
40°	54.6	48.5	41.3	36.0	32.2
42.5°	45.1	39.8	33.0	26.2	22.4
45°	35.3	31.1	25.4	17.1	12.9
47.5°	26.2	23.1	18.6	9.9	6.8
50°	17.4	16.3	12.1	4.9	4.2
52.5°	9.5	10.2	7.2	3.0	3.4
55°	2.3	4.6	3.8	2.3	2.7
57.5°	0.4	0.8	1.9	1.9	1.9
60°	0.4	0.4	0.8	1.1	1.5
62.5°	0.4	0.0	0.4	0.8	1.1
65°	0.0	0.0	0.4	0.4	0.8
67.5°	0.0	0.0	0.0	0.4	0.4
70°	0.0	0.0	0.0	0.4	0.4
72.5°	0.0	0.0	0.0	0.0	0.4
75°	0.0	0.0	0.0	0.0	0.0
77.5°	0.0	0.0	0.0	0.0	0.0
80°	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0
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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	3H	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	4H	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	6H	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	8H	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	12H	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4H	2H	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	3H	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	4H	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	6H	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	8H	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	12H	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8H	4H	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	6H	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	8H	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	12H	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12H	4H	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	6H	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	8H	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00