

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: P1058281

Luminaire Tested: S122RDR-H290D830-X4F0-XX-UDD-WVL-B

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1058281  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2406-143-19)  
Test Lab: INNOVATION CENTER  
Issue Date: 8/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S122RDR-H290D830-X4F0-XX-UDD-WVL-B  
Description: DEFINE 2 BLACK REGRESSED DIRECT RECESSED HOUSING WITH WHITE STRAIGHT BLADE LOUVER WITH DIFFUSER  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 3000K CCT, 80 CRI LEDS  
Ballast/Driver: -

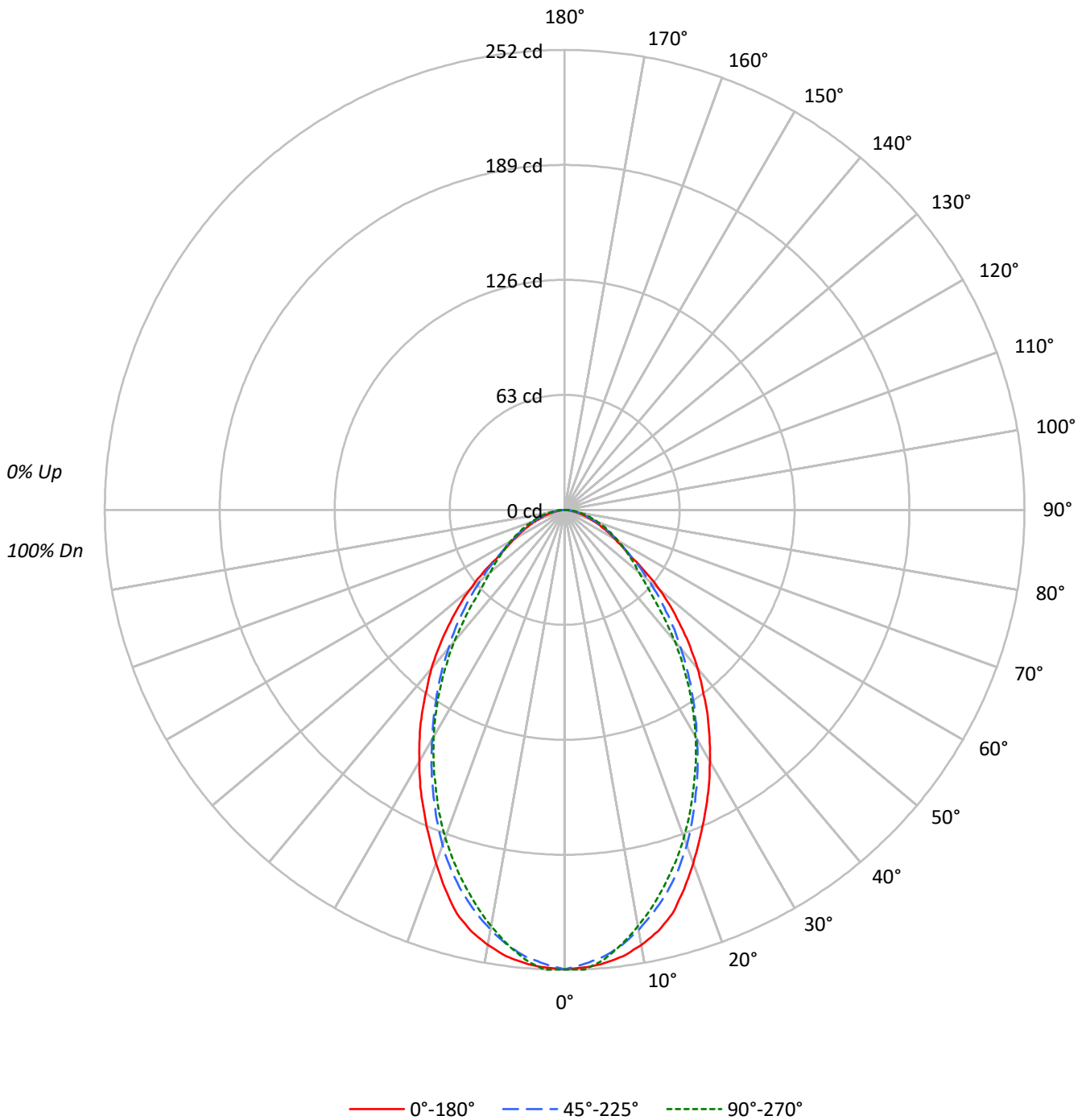
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 382.3 lumens  
Efficiency: N/A  
Efficacy: 32.7 lumens/watt  
Spacing Criteria (0/90/45): 1 / 0.92 / 1.02  
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	111	107	104	101	108	105	102	99	101	98	96	97	95	93	93	92	90	88				88
2	103	96	91	86	100	94	89	85	91	87	83	88	84	81	85	82	79	77				77
3	95	87	80	74	93	85	79	74	82	77	73	80	75	71	77	73	70	68				68
4	89	79	71	65	87	77	70	65	75	69	64	73	68	63	71	66	63	61				61
5	83	72	64	58	81	71	63	58	69	62	57	67	61	57	65	60	56	54				54
6	77	66	58	52	75	65	57	52	63	56	52	61	56	51	60	55	51	49				49
7	72	60	53	47	71	60	52	47	58	52	47	57	51	47	56	50	46	44				44
8	68	56	48	43	66	55	48	43	54	47	43	53	47	43	52	46	42	41				41
9	64	52	45	40	63	51	44	39	50	44	39	49	43	39	48	43	39	37				37
10	60	48	41	36	59	48	41	36	47	41	36	46	40	36	45	40	36	34				34

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

	0°	45°	90°
0°	4646	4646	4646
5°	4620	4553	4583
10°	4536	4379	4341
15°	4373	4144	4059
20°	4047	3841	3755
25°	3714	3469	3404
30°	3392	3092	3058
35°	3070	2737	2674
40°	2734	2385	2259
45°	2354	2051	1811
50°	1946	1725	1519
55°	1406	1432	1367
60°	1170	1229	1244
65°	1000	1070	1140
70°	820	950	1036
75°	684	799	941
80°	510	638	850
85°	169	339	762

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 2354 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	23.3	6.1
10°-20°	61.3	16.0
20°-30°	79.3	20.7
30°-40°	77.8	20.3
40°-50°	61.3	16.0
50°-60°	40.2	10.5
60°-70°	24.5	6.4
70°-80°	12.2	3.2
80°-90°	2.6	0.7
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°	163.9	42.9
0°-40°	241.7	63.2
0°-60°	343.1	89.7
0°-90°	382.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	382.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	252	252	252	252	252	
5°	249	249	246	247	247	24
15°	229	226	217	214	212	64
25°	182	176	170	170	167	84
35°	136	129	122	121	119	85
45°	90	85	79	73	69	70
55°	44	46	44	43	42	42
65°	23	23	24	26	26	23
75°	10	10	11	13	13	10
85°	1	1	2	3	4	2
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	251.8	251.8	251.8	251.8	251.8
2.5°	251.0	251.4	249.0	251.4	252.2
5°	249.4	249.4	245.8	247.4	247.4
7.5°	246.6	246.2	240.5	240.5	240.1
10°	242.1	240.5	233.7	232.5	231.7
12.5°	236.5	233.7	225.7	223.7	222.5
15°	228.9	225.7	216.9	214.1	212.5
17.5°	217.7	214.5	206.9	203.7	202.1
20°	206.1	201.3	195.6	192.8	191.2
22.5°	194.0	188.4	183.2	181.2	179.6
25°	182.4	176.4	170.4	169.6	167.2
27.5°	171.2	164.0	158.0	157.6	155.6
30°	159.2	151.5	145.1	145.5	143.5
32.5°	147.9	140.7	133.1	133.5	131.1
35°	136.3	128.7	121.5	121.1	118.7
37.5°	124.3	117.1	110.2	108.6	106.2
40°	113.5	106.2	99.0	96.2	93.8
42.5°	101.8	95.4	89.0	84.6	81.4
45°	90.2	84.6	78.6	73.0	69.4
47.5°	79.0	74.6	69.4	62.5	60.1
50°	67.8	64.5	60.1	54.1	52.9
52.5°	56.1	54.9	52.1	48.1	47.7
55°	43.7	46.1	44.5	42.9	42.5
57.5°	36.9	37.3	38.5	38.1	38.1
60°	31.7	31.7	33.3	33.7	33.7
62.5°	26.9	27.3	28.9	29.7	29.7
65°	22.9	23.3	24.5	25.7	26.1
67.5°	18.8	19.6	20.8	22.0	22.5
70°	15.2	16.0	17.6	18.8	19.2
72.5°	12.4	12.8	14.4	15.6	16.0
75°	9.6	10.0	11.2	12.8	13.2
77.5°	6.8	7.6	8.8	10.0	10.8
80°	4.8	5.2	6.0	7.6	8.0
82.5°	2.8	3.2	4.0	5.2	5.6
85°	0.8	1.2	1.6	2.8	3.6
87.5°	0.0	0.0	0.0	0.8	1.6
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	11.46	12.86	11.83	13.17	13.49	11.64	13.04	12.01	13.35	13.67
	3H	12.59	13.83	12.97	14.16	14.53	13.10	14.34	13.48	14.67	15.04
	4H	12.94	14.10	13.34	14.45	14.83	13.64	14.80	14.04	15.15	15.53
	6H	13.12	14.19	13.54	14.56	14.96	14.05	15.12	14.46	15.49	15.88
	8H	13.15	14.17	13.58	14.56	14.96	14.18	15.19	14.60	15.58	15.99
	12H	13.13	14.11	13.57	14.49	14.92	14.26	15.23	14.69	15.61	16.04
4H	2H	11.92	13.09	12.32	13.44	13.82	12.07	13.23	12.47	13.58	13.96
	3H	13.25	14.21	13.67	14.61	15.02	13.74	14.69	14.15	15.10	15.50
	4H	13.70	14.55	14.13	14.97	15.41	14.40	15.26	14.83	15.68	16.12
	6H	13.97	14.71	14.43	15.16	15.62	14.93	15.67	15.39	16.12	16.58
	8H	14.01	14.70	14.48	15.15	15.62	15.10	15.79	15.57	16.24	16.71
	12H	14.01	14.62	14.49	15.10	15.58	15.22	15.84	15.70	16.32	16.79
8H	4H	13.91	14.60	14.38	15.05	15.52	14.55	15.24	15.01	15.69	16.16
	6H	14.25	14.82	14.75	15.32	15.80	15.18	15.74	15.68	16.24	16.72
	8H	14.33	14.84	14.85	15.36	15.85	15.41	15.92	15.93	16.43	16.92
	12H	14.35	14.80	14.86	15.29	15.86	15.59	16.04	16.11	16.54	17.11
12H	4H	13.92	14.54	14.41	15.02	15.49	14.53	15.15	15.02	15.63	16.10
	6H	14.28	14.79	14.80	15.30	15.79	15.17	15.68	15.69	16.19	16.68
	8H	14.40	14.85	14.91	15.34	15.91	15.44	15.89	15.96	16.39	16.96