

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: P1058296

Luminaire Tested: S122RDR-H290D840-X4F0-XX-UDD-SVL-B

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1058296  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2406-143-20)  
Test Lab: INNOVATION CENTER  
Issue Date: 8/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S122RDR-H290D840-X4F0-XX-UDD-SVL-B  
Description: DEFINE 2 BLACK REGRESSED DIRECT RECESSED HOUSING WITH SILVER STRAIGHT BLADE  
LOUVER WITH DIFFUSER  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 4000K CCT, 80 CRI LEDS  
Ballast/Driver: -

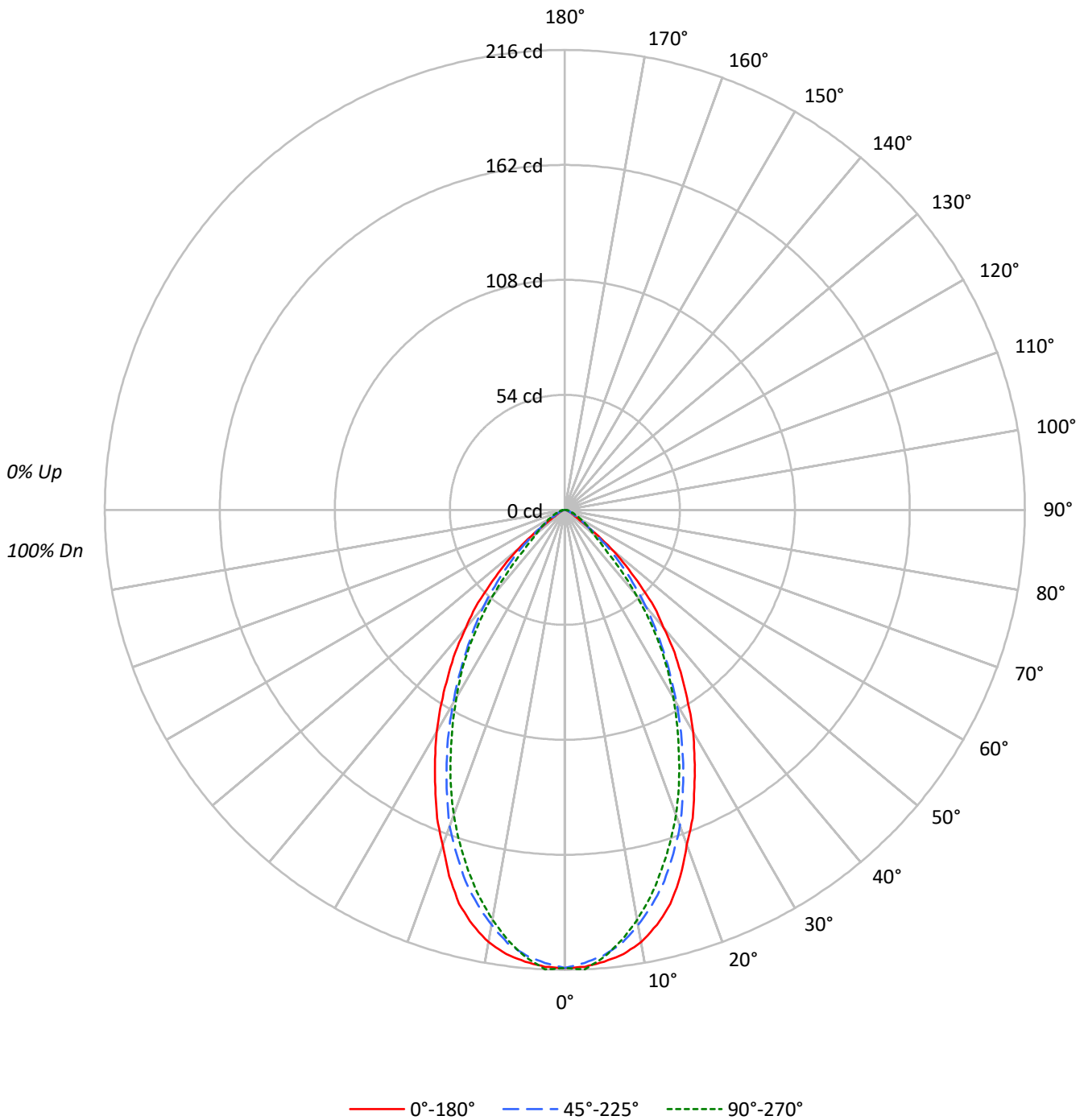
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 231.4 lumens  
Efficiency: N/A  
Efficacy: 19.8 lumens/watt  
Spacing Criteria (0/90/45): 0.93 / 0.85 / 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	
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	107	104	110	107	105	103	103	101	99	100	98	96	96	95	94	92
2	106	101	96	92	104	99	95	91	96	92	89	93	90	87	90	87	85	84
3	100	93	87	82	98	91	86	82	88	84	80	86	82	79	84	80	78	76
4	94	85	79	74	92	84	78	74	82	77	73	80	76	72	78	74	71	70
5	88	79	72	68	87	78	72	67	76	71	67	74	70	66	73	69	65	64
6	83	73	67	62	82	72	66	62	71	65	61	69	64	61	68	64	60	59
7	79	68	62	57	77	68	61	57	66	60	56	65	60	56	64	59	56	54
8	74	64	57	53	73	63	57	52	62	56	52	61	56	52	60	55	52	50
9	70	60	53	49	69	59	53	49	58	52	48	57	52	48	56	52	48	47
10	67	56	50	45	66	56	49	45	55	49	45	54	49	45	53	48	45	44

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

	0°	45°	90°
0°	3971	3971	3971
5°	3945	3890	3906
10°	3864	3710	3661
15°	3660	3446	3347
20°	3289	3105	2995
25°	2930	2675	2580
30°	2563	2233	2169
35°	2158	1809	1750
40°	1739	1428	1262
45°	1300	1031	752
50°	812	666	494
55°	277	360	402
60°	159	221	317
65°	114	148	245
70°	92	113	183
75°	64	93	150
80°	43	96	138
85°	0	0	85

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 1300 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	19.8	8.6
10°-20°	50.8	21.9
20°-30°	61.1	26.4
30°-40°	52.2	22.6
40°-50°	30.6	13.2
50°-60°	11.1	4.8
60°-70°	3.9	1.7
70°-80°	1.6	0.7
80°-90°	0.3	0.1
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°	131.7	56.9
0°-40°	184.0	79.5
0°-60°	225.6	97.5
0°-90°	231.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	231.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	215	215	215	215	215	
5°	213	214	210	211	211	20
15°	192	189	180	177	175	53
25°	144	138	131	129	127	66
35°	96	88	80	80	78	60
45°	50	45	40	33	29	38
55°	9	12	11	12	12	11
65°	3	3	3	5	6	3
75°	1	1	1	2	2	1
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°	215.2	215.2	215.2	215.2	215.2
2.5°	214.8	215.2	213.0	215.2	216.0
5°	213.0	213.5	210.0	210.9	210.9
7.5°	210.5	210.0	205.3	204.4	204.0
10°	206.2	204.9	198.0	196.7	195.4
12.5°	199.7	197.1	189.8	187.7	186.0
15°	191.6	188.6	180.4	177.0	175.2
17.5°	180.4	177.0	169.2	165.8	164.1
20°	167.5	164.1	158.1	154.2	152.5
22.5°	156.8	151.2	144.7	142.2	140.0
25°	143.9	137.9	131.4	129.3	126.7
27.5°	131.9	124.6	118.1	116.4	114.2
30°	120.3	112.5	104.8	104.8	101.8
32.5°	107.8	100.5	92.3	91.9	90.2
35°	95.8	88.5	80.3	79.5	77.7
37.5°	84.6	77.3	69.6	67.0	64.9
40°	72.2	65.7	59.3	55.0	52.4
42.5°	62.3	55.0	48.5	43.4	39.9
45°	49.8	44.7	39.5	33.1	28.8
47.5°	38.7	35.2	30.9	23.6	21.5
50°	28.3	26.6	23.2	17.6	17.2
52.5°	18.0	18.9	16.8	13.7	15.0
55°	8.6	12.0	11.2	11.6	12.5
57.5°	5.6	6.0	8.2	9.4	10.3
60°	4.3	4.3	6.0	7.7	8.6
62.5°	3.4	3.4	4.7	6.4	6.9
65°	2.6	3.0	3.4	4.7	5.6
67.5°	2.1	2.1	2.6	3.9	4.3
70°	1.7	1.7	2.1	3.0	3.4
72.5°	1.3	1.3	1.7	2.6	2.6
75°	0.9	1.3	1.3	1.7	2.1
77.5°	0.9	0.9	0.9	1.3	1.7
80°	0.4	0.4	0.9	0.9	1.3
82.5°	0.4	0.4	0.4	0.4	0.9
85°	0.0	0.0	0.0	0.4	0.4
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	0.67	1.83	1.03	2.14	2.46	4.04	5.20	4.41	5.52	5.83
	3H	1.17	2.19	1.55	2.52	2.89	4.78	5.80	5.16	6.13	6.50
	4H	1.31	2.26	1.72	2.61	3.00	4.99	5.94	5.40	6.29	6.68
	6H	1.40	2.26	1.81	2.64	3.03	5.14	6.01	5.56	6.38	6.78
	8H	1.39	2.21	1.83	2.60	3.01	5.18	6.00	5.61	6.39	6.80
	12H	1.36	2.14	1.79	2.52	2.95	5.18	5.96	5.61	6.34	6.77
4H	2H	0.97	1.91	1.37	2.27	2.65	4.01	4.95	4.41	5.31	5.69
	3H	1.61	2.37	2.02	2.78	3.19	4.89	5.66	5.30	6.06	6.47
	4H	1.86	2.55	2.30	2.97	3.41	5.17	5.85	5.60	6.27	6.72
	6H	1.99	2.58	2.46	3.03	3.50	5.40	5.98	5.87	6.43	6.90
	8H	2.00	2.54	2.47	2.99	3.46	5.45	5.99	5.92	6.44	6.92
	12H	1.96	2.44	2.45	2.92	3.40	5.47	5.94	5.96	6.43	6.91
8H	4H	1.98	2.52	2.45	2.97	3.45	5.10	5.65	5.57	6.09	6.57
	6H	2.15	2.59	2.66	3.09	3.58	5.37	5.81	5.88	6.31	6.80
	8H	2.18	2.58	2.71	3.10	3.59	5.44	5.83	5.96	6.35	6.85
	12H	2.15	2.50	2.67	3.00	3.58	5.49	5.84	6.01	6.33	6.91
12H	4H	1.97	2.44	2.45	2.93	3.41	5.05	5.53	5.54	6.02	6.49
	6H	2.15	2.55	2.68	3.07	3.56	5.32	5.72	5.85	6.24	6.73
	8H	2.21	2.56	2.73	3.05	3.63	5.41	5.76	5.93	6.25	6.83