

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: P1058341

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

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1058341  
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-H290D940-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, 90 CRI LEDS  
Ballast/Driver: -

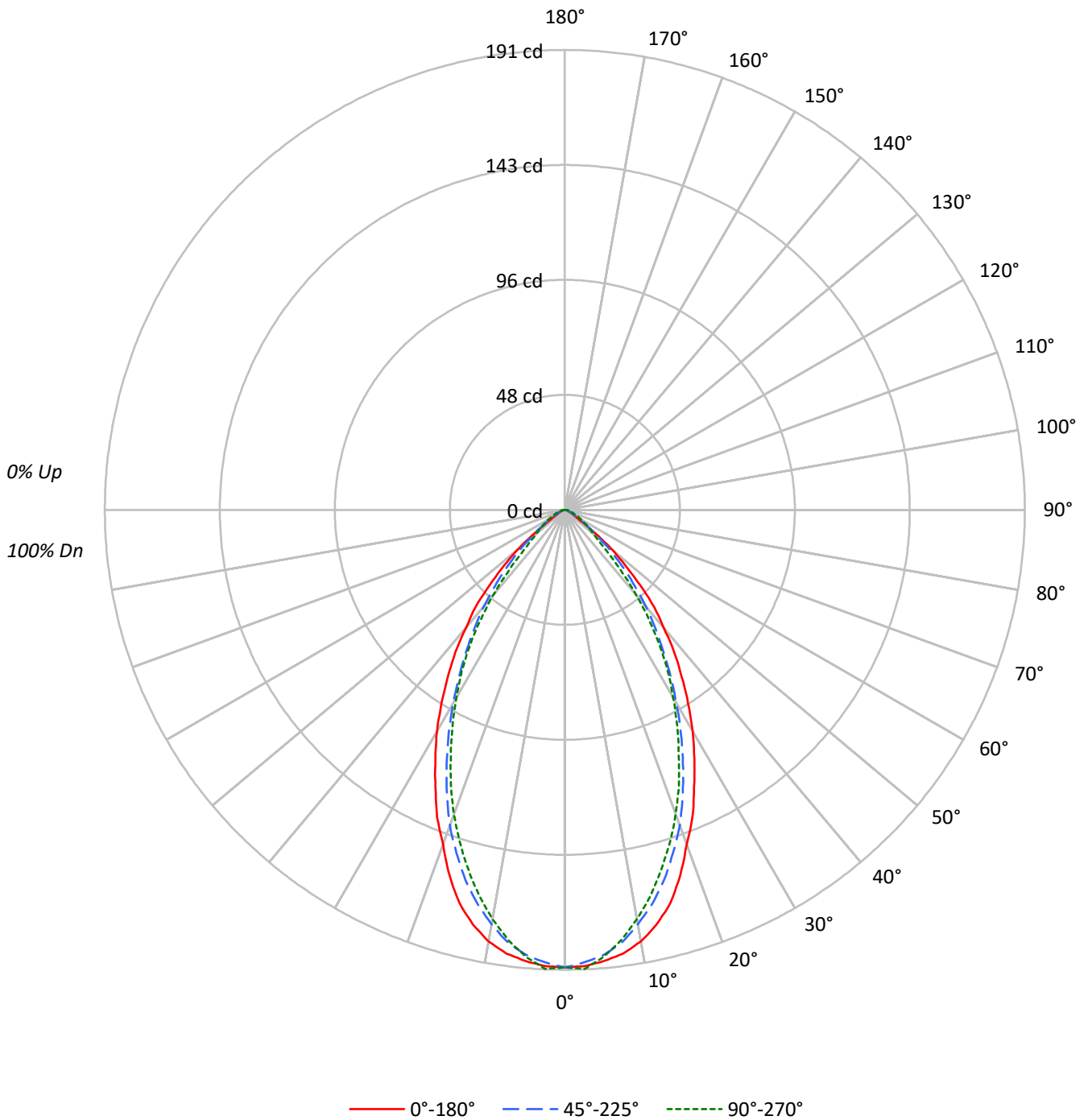
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 204.4 lumens  
Efficiency: N/A  
Efficacy: 17.5 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	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°	3506	3506	3506
5°	3484	3436	3449
10°	3410	3275	3234
15°	3230	3043	2955
20°	2904	2741	2643
25°	2588	2364	2278
30°	2263	1971	1916
35°	1906	1597	1545
40°	1534	1260	1115
45°	1148	911	663
50°	718	588	436
55°	244	318	354
60°	140	196	280
65°	100	131	214
70°	81	103	162
75°	57	78	135
80°	43	85	117
85°	0	0	85

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 1148 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	17.5	8.6
10°-20°	44.8	21.9
20°-30°	54.0	26.4
30°-40°	46.1	22.6
40°-50°	27.0	13.2
50°-60°	9.8	4.8
60°-70°	3.5	1.7
70°-80°	1.4	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°	116.3	56.9
0°-40°	162.4	79.5
0°-60°	199.2	97.5
0°-90°	204.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	204.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	190	190	190	190	190	
5°	188	188	186	186	186	18
15°	169	166	159	156	155	47
25°	127	122	116	114	112	58
35°	85	78	71	70	69	53
45°	44	39	35	29	25	34
55°	8	11	10	10	11	9
65°	2	3	3	4	5	2
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°	190.0	190.0	190.0	190.0	190.0
2.5°	189.6	190.0	188.1	190.0	190.8
5°	188.1	188.5	185.5	186.2	186.2
7.5°	185.8	185.5	181.3	180.5	180.1
10°	182.0	180.9	174.8	173.7	172.6
12.5°	176.4	174.1	167.6	165.7	164.2
15°	169.1	166.5	159.3	156.3	154.7
17.5°	159.3	156.3	149.4	146.4	144.9
20°	147.9	144.9	139.6	136.2	134.6
22.5°	138.4	133.5	127.8	125.5	123.6
25°	127.1	121.7	116.1	114.2	111.9
27.5°	116.4	110.0	104.3	102.8	100.9
30°	106.2	99.4	92.5	92.5	89.9
32.5°	95.2	88.7	81.5	81.2	79.6
35°	84.6	78.1	70.9	70.2	68.6
37.5°	74.7	68.3	61.4	59.2	57.3
40°	63.7	58.0	52.3	48.5	46.3
42.5°	55.0	48.5	42.9	38.3	35.3
45°	44.0	39.4	34.9	29.2	25.4
47.5°	34.1	31.1	27.3	20.9	19.0
50°	25.0	23.5	20.5	15.5	15.2
52.5°	15.9	16.7	14.8	12.1	13.3
55°	7.6	10.6	9.9	10.2	11.0
57.5°	4.9	5.3	7.2	8.3	9.1
60°	3.8	3.8	5.3	6.8	7.6
62.5°	3.0	3.0	4.2	5.7	6.1
65°	2.3	2.7	3.0	4.2	4.9
67.5°	1.9	1.9	2.3	3.4	3.8
70°	1.5	1.5	1.9	2.7	3.0
72.5°	1.1	1.1	1.5	2.3	2.3
75°	0.8	1.1	1.1	1.5	1.9
77.5°	0.8	0.8	0.8	1.1	1.5
80°	0.4	0.4	0.8	0.8	1.1
82.5°	0.4	0.4	0.4	0.4	0.8
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	0.23	1.39	0.59	1.70	2.02	3.61	4.77	3.97	5.08	5.40
	3H	0.74	1.77	1.13	2.10	2.47	4.34	5.37	4.73	5.70	6.07
	4H	0.88	1.83	1.28	2.18	2.57	4.57	5.51	4.97	5.87	6.25
	6H	0.97	1.84	1.39	2.21	2.61	4.71	5.58	5.13	5.95	6.34
	8H	0.98	1.80	1.42	2.19	2.60	4.75	5.56	5.18	5.95	6.36
	12H	0.95	1.73	1.38	2.11	2.55	4.75	5.53	5.19	5.92	6.35
4H	2H	0.53	1.48	0.93	1.83	2.21	3.57	4.52	3.98	4.87	5.26
	3H	1.18	1.95	1.60	2.36	2.76	4.46	5.23	4.88	5.64	6.04
	4H	1.42	2.10	1.85	2.52	2.97	4.74	5.43	5.18	5.85	6.29
	6H	1.56	2.15	2.03	2.60	3.07	4.96	5.55	5.43	6.00	6.47
	8H	1.59	2.13	2.06	2.58	3.06	5.01	5.56	5.49	6.01	6.48
	12H	1.55	2.03	2.04	2.52	2.99	5.04	5.52	5.53	6.01	6.48
8H	4H	1.53	2.08	2.00	2.52	3.00	4.67	5.22	5.15	5.67	6.14
	6H	1.73	2.17	2.24	2.67	3.15	4.93	5.37	5.44	5.87	6.36
	8H	1.79	2.18	2.31	2.70	3.20	5.00	5.40	5.53	5.92	6.41
	12H	1.77	2.11	2.29	2.61	3.19	5.08	5.43	5.60	5.92	6.50
12H	4H	1.52	2.00	2.01	2.48	2.96	4.63	5.10	5.12	5.59	6.07
	6H	1.73	2.13	2.26	2.65	3.14	4.89	5.28	5.41	5.80	6.30
	8H	1.82	2.17	2.34	2.66	3.24	4.98	5.33	5.50	5.83	6.40