

Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269



Scaled data based on original data using  
LM-79-2024 Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P1055701

Luminaire Tested: S123R3DR-H1000D935-X4F0-XX-UDD-F-B

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1055701  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-5)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/25/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123R3DR-H1000D935-X4F0-XX-UDD-F-B  
Description: DEFINE 3, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 3500K CCT, 90 CRI LEDS  
Ballast/Driver: -

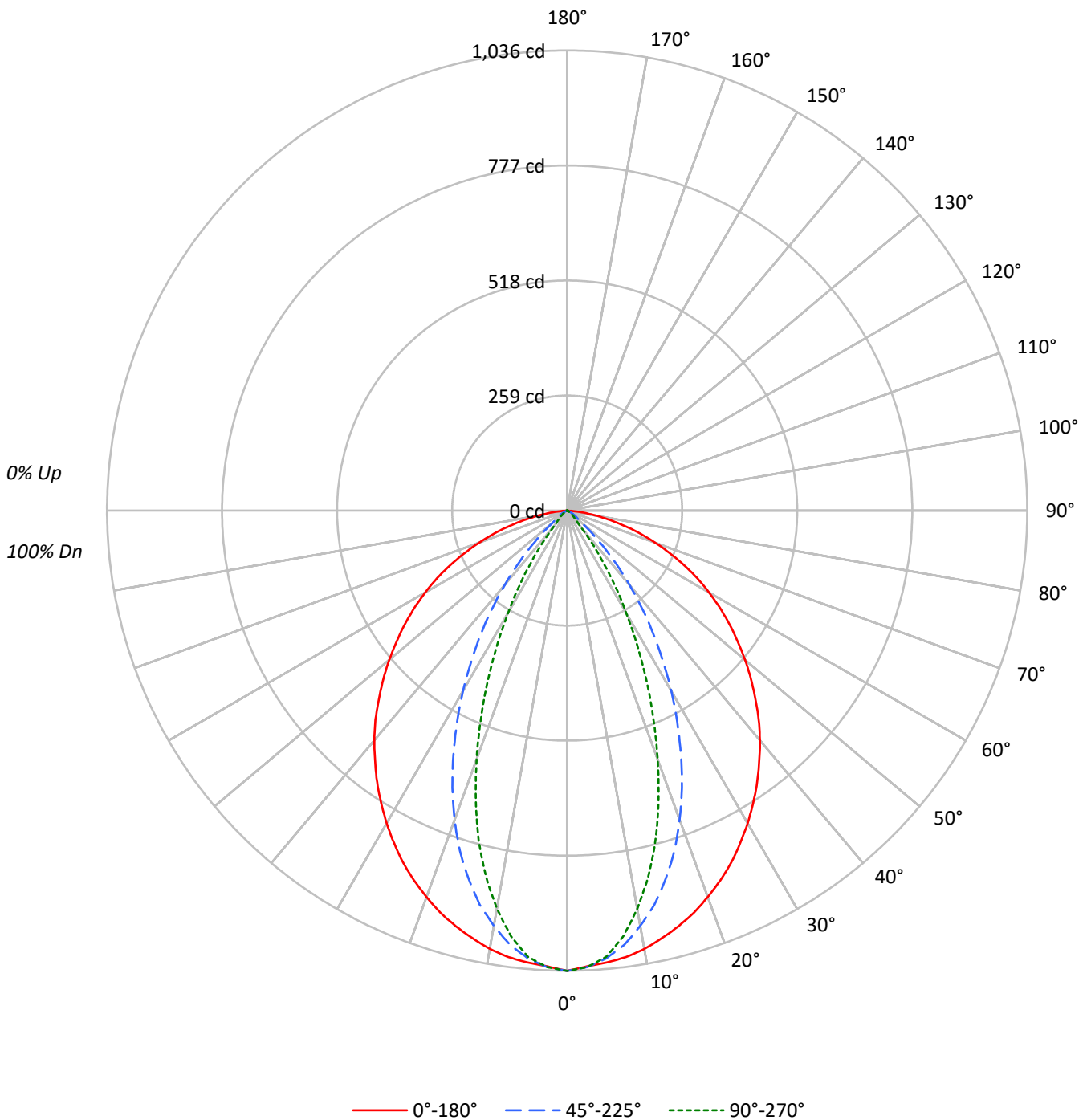
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1213.2 lumens  
Efficiency: N/A  
Efficacy: 39.3 lumens/watt  
Spacing Criteria (0/90/45): 1.17 / 0.7 / 0.86  
Luminous Opening: Rectangular (W 0.23' x L: 3.9' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 30.9  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): 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

TEST NUMBER: P1055701

CATALOG NUMBER: S123R3DR-H1000D935-X4F0-XX-UDD-F-B

### Luminous Intensity Polar Plot





TEST NUMBER: P1055701

CATALOG NUMBER: S123R3DR-H1000D935-X4F0-XX-UDD-F-B

**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	112	108	105	103	109	106	104	101	102	100	98	98	97	95	95	93	92	90
2	105	99	94	89	102	97	92	88	93	90	86	90	87	84	87	85	83	81
3	98	90	84	79	96	88	83	78	86	81	77	83	79	76	81	77	74	73
4	92	82	75	70	90	81	75	70	79	73	69	77	72	68	75	71	67	65
5	86	76	69	63	84	75	68	63	73	67	62	71	66	62	69	65	61	59
6	81	70	63	57	79	69	62	57	67	61	57	66	61	56	64	60	56	54
7	76	65	58	53	74	64	57	52	63	57	52	61	56	52	60	55	52	50
8	71	60	53	48	70	60	53	48	58	52	48	57	52	48	56	51	48	46
9	68	56	49	45	66	56	49	45	55	49	45	54	48	44	53	48	44	43
10	64	53	46	42	63	52	46	42	51	46	41	51	45	41	50	45	41	40

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

	0°	45°	90°
0°	12496	12496	12496
5°	12363	12245	12207
10°	12268	11623	11137
15°	12092	10709	9596
20°	11878	9505	7643
25°	11629	8053	5635
30°	11317	6526	3698
35°	10983	4969	2025
40°	10628	3436	694
45°	10211	1998	404
50°	9802	786	242
55°	9379	498	114
60°	8893	311	53
65°	8282	154	31
70°	7427	78	39
75°	6312	51	51
80°	4700	76	0
85°	1784	0	0

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 10211 cd/sqm



TEST NUMBER: P1055701

CATALOG NUMBER: S123R3DR-H1000D935-X4F0-XX-UDD-F-B

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	95.0	7.8
10°-20°	241.2	19.9
20°-30°	287.7	23.7
30°-40°	244.0	20.1
40°-50°	165.9	13.7
50°-60°	102.8	8.5
60°-70°	52.1	4.3
70°-80°	21.3	1.8
80°-90°	3.3	0.3
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°	623.9	51.4
0°-40°	867.9	71.5
0°-60°	1136.6	93.7
0°-90°	1213.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1213.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1036	1036	1036	1036	1036	
5°	1022	1031	1012	1004	1009	97
15°	969	944	858	790	769	273
25°	874	792	605	468	424	402
35°	746	599	338	182	138	466
45°	599	392	117	29	24	463
55°	446	198	24	9	5	399
65°	290	48	5	1	1	287
75°	136	9	1	1	1	144
85°	13	0	0	1	0	23
90°	0	0	0	0	0	



TEST NUMBER: P1055701

CATALOG NUMBER: S123R3DR-H1000D935-X4F0-XX-UDD-F-B

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1036.5	1036.5	1036.5	1036.5	1036.5
2.5°	1026.9	1040.8	1029.0	1027.9	1029.0
5°	1021.5	1031.2	1011.8	1004.3	1008.6
7.5°	1014.0	1018.3	986.0	966.7	966.7
10°	1002.1	998.9	949.4	917.2	909.7
12.5°	986.0	973.1	908.6	858.0	844.1
15°	968.8	944.1	858.0	790.3	768.8
17.5°	949.4	911.8	803.2	715.0	683.9
20°	925.8	875.3	740.8	633.3	595.7
22.5°	901.1	835.5	675.3	549.5	507.5
25°	874.2	792.5	605.4	467.7	423.6
27.5°	844.1	747.3	536.5	389.2	340.9
30°	812.9	700.0	468.8	314.0	265.6
32.5°	779.6	650.5	401.1	245.2	200.0
35°	746.2	598.9	337.6	181.7	137.6
37.5°	710.7	547.3	276.3	125.8	87.1
40°	675.3	496.8	218.3	79.6	44.1
42.5°	638.7	444.1	165.6	39.8	30.1
45°	598.9	392.5	117.2	29.0	23.7
47.5°	561.3	343.0	77.4	23.7	18.3
50°	522.6	293.5	41.9	17.2	12.9
52.5°	483.9	246.2	30.1	12.9	8.6
55°	446.2	197.8	23.7	8.6	5.4
57.5°	407.5	155.9	18.3	5.4	3.2
60°	368.8	115.1	12.9	3.2	2.2
62.5°	330.1	79.6	8.6	2.2	1.1
65°	290.3	48.4	5.4	1.1	1.1
67.5°	249.5	33.3	3.2	1.1	1.1
70°	210.7	23.7	2.2	1.1	1.1
72.5°	172.0	15.1	1.1	1.1	0.0
75°	135.5	8.6	1.1	1.1	1.1
77.5°	100.0	3.2	1.1	1.1	0.0
80°	67.7	1.1	1.1	1.1	0.0
82.5°	37.6	0.0	1.1	1.1	0.0
85°	12.9	0.0	0.0	1.1	0.0
87.5°	0.0	0.0	0.0	1.1	0.0
90°	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P1055701  
 CATALOG NUMBER: S123R3DR-H1000D935-X4F0-XX-UDD-F-B

**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	17.82	19.10	18.19	19.42	19.73	0.00	0.00	0.00	0.00	0.00
	3H	19.77	20.90	20.15	21.23	21.60	0.00	0.00	0.00	0.00	0.00
	4H	20.59	21.65	21.00	22.00	22.39	0.00	0.00	0.00	0.00	0.00
	6H	21.15	22.12	21.56	22.49	22.88	0.00	0.00	0.00	0.00	0.00
	8H	21.27	22.19	21.70	22.58	22.99	0.00	0.00	0.00	0.00	0.00
	12H	21.30	22.17	21.73	22.56	22.99	0.00	0.00	0.00	0.00	0.00
4H	2H	17.59	18.64	17.99	18.99	19.38	0.00	0.00	0.00	0.00	0.00
	3H	19.54	20.40	19.95	20.81	21.21	0.00	0.00	0.00	0.00	0.00
	4H	20.35	21.12	20.79	21.54	21.99	0.00	0.00	0.00	0.00	0.00
	6H	20.95	21.62	21.42	22.06	22.53	0.00	0.00	0.00	0.00	0.00
	8H	21.10	21.72	21.58	22.17	22.64	0.00	0.00	0.00	0.00	0.00
	12H	21.15	21.70	21.64	22.18	22.65	0.00	0.00	0.00	0.00	0.00
8H	4H	20.21	20.83	20.68	21.28	21.75	0.00	0.00	0.00	0.00	0.00
	6H	20.79	21.29	21.30	21.79	22.27	0.00	0.00	0.00	0.00	0.00
	8H	20.94	21.39	21.46	21.91	22.40	0.00	0.00	0.00	0.00	0.00
	12H	21.00	21.39	21.51	21.89	22.46	0.00	0.00	0.00	0.00	0.00
12H	4H	20.16	20.71	20.65	21.19	21.66	0.00	0.00	0.00	0.00	0.00
	6H	20.73	21.18	21.25	21.69	22.19	0.00	0.00	0.00	0.00	0.00
	8H	20.90	21.29	21.41	21.79	22.36	0.00	0.00	0.00	0.00	0.00