

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: P1055702

Luminaire Tested: S123R3DR-H1000D935-X4F0-XX-UDD-FLL-S

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1055702  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-6)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/25/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123R3DR-H1000D935-X4F0-XX-UDD-FLL-S  
Description: DEFINE 3, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 3500K CCT, 90 CRI LEDS  
Ballast/Driver: -

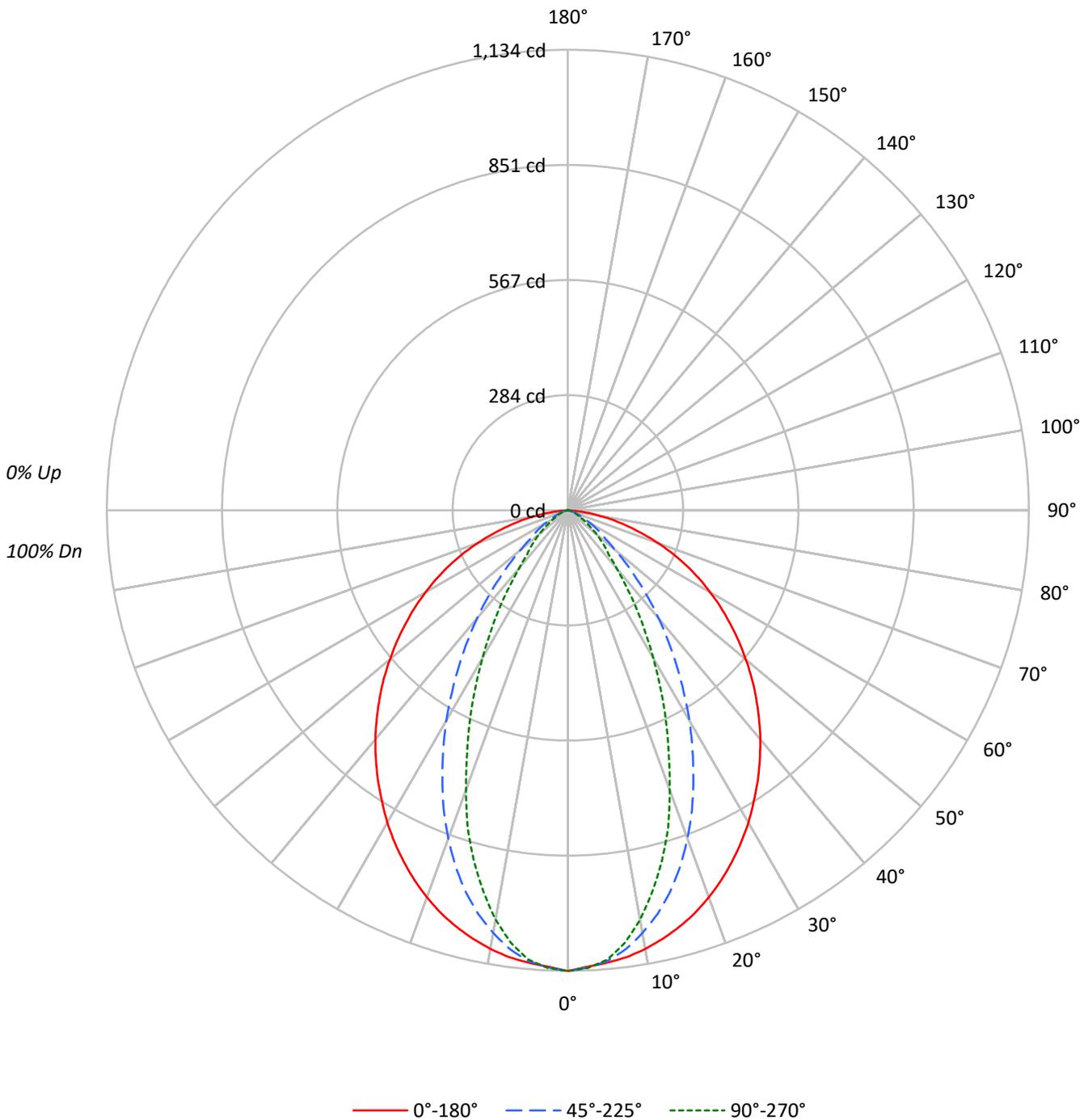
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1577.6 lumens  
Efficiency: N/A  
Efficacy: 51.1 lumens/watt  
Spacing Criteria (0/90/45): 1.17 / 0.77 / 0.94  
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 (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

TEST NUMBER: P1055702

CATALOG NUMBER: S123R3DR-H1000D935-X4F0-XX-UDD-FLL-S

### Luminous Intensity Polar Plot





TEST NUMBER: P1055702

CATALOG NUMBER: S123R3DR-H1000D935-X4F0-XX-UDD-FLL-S

**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	111	108	104	102	109	106	103	100	101	99	97	98	96	94	94	93	91	89
2	104	97	92	87	101	95	90	86	92	88	84	89	85	82	86	83	81	79
3	96	88	81	76	94	86	80	76	84	78	74	81	77	73	79	75	72	70
4	90	80	73	67	88	79	72	67	76	71	66	74	69	65	72	68	64	62
5	84	73	66	60	82	72	65	60	70	64	59	68	63	59	67	62	58	56
6	78	67	60	54	77	66	59	54	65	58	53	63	57	53	62	57	53	51
7	73	62	54	49	72	61	54	49	60	53	49	58	53	48	57	52	48	46
8	69	57	50	45	68	57	50	45	56	49	45	54	49	44	53	48	44	42
9	65	53	46	41	64	53	46	41	52	45	41	51	45	41	50	45	41	39
10	62	50	43	38	60	49	43	38	48	42	38	48	42	38	47	42	38	36

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

	0°	45°	90°
0°	13677	13677	13677
5°	13534	13482	13442
10°	13427	12940	12531
15°	13247	12132	11152
20°	13010	11037	9394
25°	12701	9712	7581
30°	12365	8322	5837
35°	11981	6869	4320
40°	11591	5466	2945
45°	11165	4089	2218
50°	10710	2843	1735
55°	10239	2079	1265
60°	9749	1555	907
65°	9172	1044	705
70°	8302	758	568
75°	7164	550	452
80°	5749	451	375
85°	2974	443	304

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 11165 cd/sqm



TEST NUMBER: P1055702

CATALOG NUMBER: S123R3DR-H1000D935-X4F0-XX-UDD-FLL-S

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	104.9	6.6
10°-20°	273.0	17.3
20°-30°	342.9	21.7
30°-40°	319.4	20.2
40°-50°	244.5	15.5
50°-60°	162.5	10.3
60°-70°	87.6	5.6
70°-80°	35.9	2.3
80°-90°	6.9	0.4
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°	720.8	45.7
0°-40°	1040.2	65.9
0°-60°	1447.2	91.7
0°-90°	1577.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1577.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1134	1134	1134	1134	1134	
5°	1118	1130	1114	1110	1111	106
15°	1061	1044	972	915	894	299
25°	955	890	730	609	570	440
35°	814	694	467	330	294	509
45°	655	484	240	141	130	505
55°	487	282	99	69	60	436
65°	322	109	37	27	25	318
75°	154	26	12	11	10	165
85°	22	3	3	3	2	32
90°	0	0	0	0	0	



TEST NUMBER: P1055702

CATALOG NUMBER: S123R3DR-H1000D935-X4F0-XX-UDD-FLL-S

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1134.4	1134.4	1134.4	1134.4	1134.4
2.5°	1124.7	1138.7	1126.9	1127.9	1127.9
5°	1118.3	1130.1	1114.0	1109.7	1110.7
7.5°	1109.7	1117.2	1090.3	1076.3	1074.2
10°	1096.8	1098.9	1057.0	1032.2	1023.6
12.5°	1080.6	1073.1	1018.3	977.4	961.3
15°	1061.3	1044.1	972.0	915.0	893.5
17.5°	1039.8	1010.7	919.3	845.1	819.3
20°	1014.0	973.1	860.2	767.7	732.2
22.5°	986.0	933.3	797.8	688.2	648.4
25°	954.8	890.3	730.1	608.6	569.9
27.5°	922.6	844.1	663.4	533.3	493.5
30°	888.2	796.8	597.8	460.2	419.3
32.5°	850.5	745.1	530.1	392.5	351.6
35°	814.0	693.5	466.7	330.1	293.5
37.5°	775.3	641.9	405.4	275.3	234.4
40°	736.5	589.2	347.3	221.5	187.1
42.5°	695.7	536.6	292.5	176.3	149.5
45°	654.8	483.9	239.8	140.9	130.1
47.5°	614.0	431.2	193.5	121.5	110.8
50°	571.0	380.6	151.6	103.2	92.5
52.5°	530.1	330.1	118.3	84.9	75.3
55°	487.1	281.7	98.9	68.8	60.2
57.5°	447.3	232.3	81.7	53.8	47.3
60°	404.3	188.2	64.5	41.9	37.6
62.5°	363.4	147.3	49.5	33.3	30.1
65°	321.5	108.6	36.6	26.9	24.7
67.5°	279.6	78.5	28.0	21.5	20.4
70°	235.5	59.1	21.5	17.2	16.1
72.5°	193.5	41.9	16.1	14.0	12.9
75°	153.8	25.8	11.8	10.8	9.7
77.5°	118.3	15.1	8.6	8.6	7.5
80°	82.8	8.6	6.5	6.5	5.4
82.5°	50.5	5.4	4.3	4.3	4.3
85°	21.5	3.2	3.2	3.2	2.2
87.5°	3.2	1.1	1.1	1.1	1.1
90°	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P1055702  
 CATALOG NUMBER: S123R3DR-H1000D935-X4F0-XX-UDD-FLL-S

**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	18.90	20.26	19.27	20.57	20.89	7.48	8.83	7.84	9.15	9.46
	3H	20.65	21.86	21.03	22.19	22.55	8.14	9.34	8.52	9.67	10.04
	4H	21.35	22.48	21.76	22.83	23.21	8.34	9.46	8.74	9.81	10.19
	6H	21.87	22.90	22.28	23.27	23.66	8.46	9.49	8.87	9.86	10.25
	8H	22.01	22.99	22.44	23.38	23.78	8.49	9.47	8.92	9.86	10.27
	12H	22.06	22.99	22.49	23.38	23.81	8.50	9.44	8.94	9.82	10.25
4H	2H	18.71	19.83	19.11	20.18	20.57	8.03	9.16	8.44	9.51	9.89
	3H	20.50	21.42	20.91	21.83	22.23	8.83	9.75	9.24	10.16	10.56
	4H	21.20	22.02	21.63	22.44	22.88	9.09	9.91	9.53	10.33	10.78
	6H	21.77	22.48	22.23	22.92	23.39	9.29	10.00	9.75	10.45	10.91
	8H	21.94	22.60	22.41	23.05	23.52	9.34	10.01	9.81	10.45	10.92
	12H	22.03	22.61	22.51	23.10	23.57	9.38	9.96	9.86	10.44	10.92
8H	4H	21.07	21.74	21.54	22.18	22.65	9.40	10.07	9.87	10.51	10.98
	6H	21.63	22.17	22.13	22.67	23.15	9.65	10.19	10.15	10.69	11.17
	8H	21.80	22.29	22.32	22.80	23.30	9.74	10.23	10.26	10.74	11.23
	12H	21.91	22.34	22.42	22.83	23.40	9.82	10.25	10.34	10.74	11.32
12H	4H	21.03	21.62	21.52	22.10	22.57	9.45	10.04	9.93	10.52	10.99
	6H	21.57	22.06	22.09	22.57	23.06	9.70	10.19	10.22	10.70	11.19
	8H	21.76	22.19	22.28	22.69	23.26	9.83	10.25	10.34	10.75	11.32