

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: P1055696

Luminaire Tested: S123R3DR-H1000D927-X4F0-XX-UDD-F-S

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1055696  
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-H1000D927-X4F0-XX-UDD-F-S  
Description: DEFINE 3, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 2700K CCT, 90 CRI LEDS  
Ballast/Driver: -

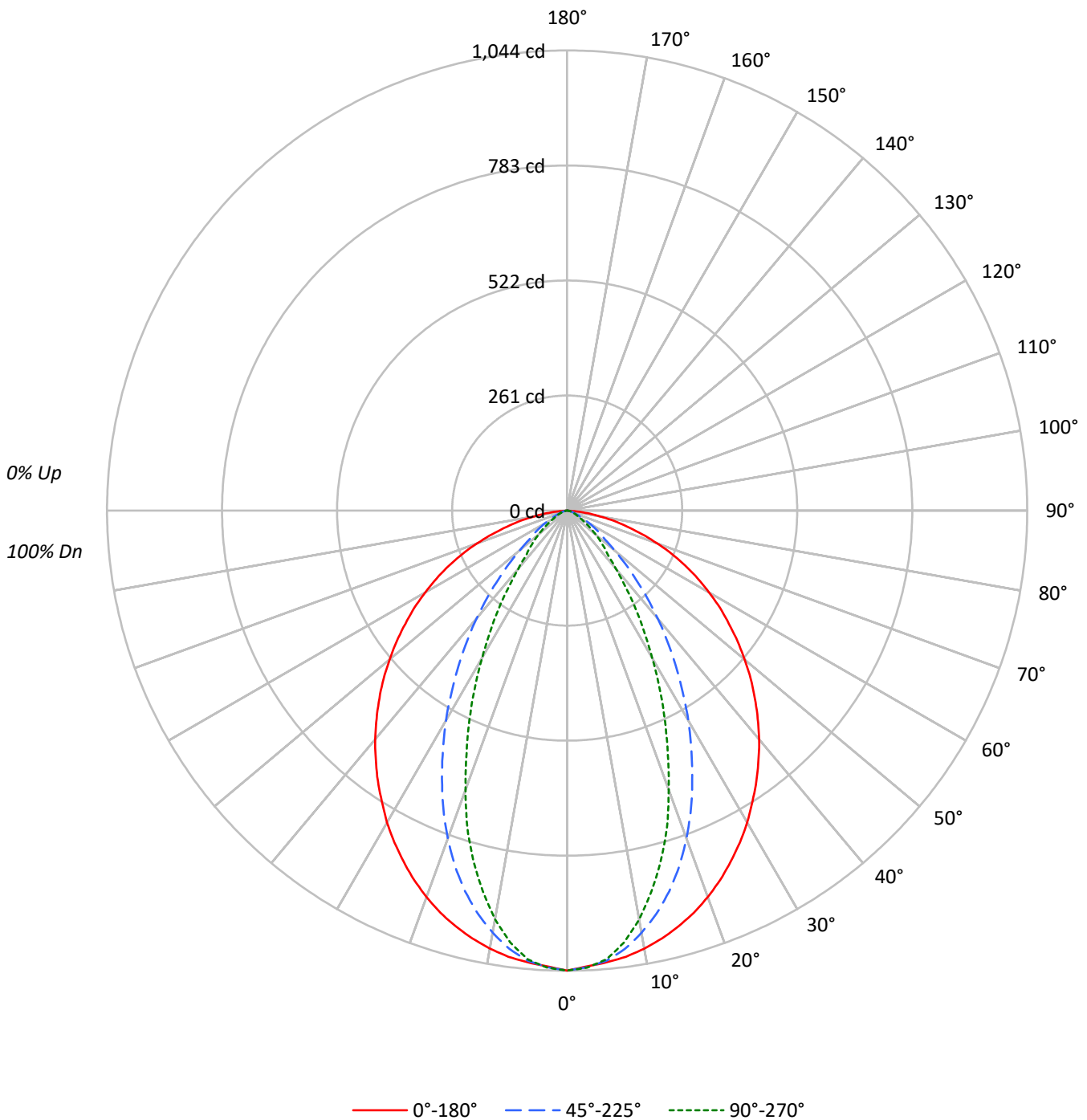
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1451.5 lumens  
Efficiency: N/A  
Efficacy: 47.0 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

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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	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°	12583	12583	12583
5°	12452	12404	12369
10°	12354	11906	11530
15°	12187	11162	10261
20°	11969	10154	8644
25°	11686	8935	6975
30°	11377	7658	5371
35°	11022	6320	3975
40°	10666	5028	2709
45°	10273	3761	2041
50°	9853	2617	1596
55°	9421	1913	1164
60°	8970	1432	834
65°	8439	959	650
70°	7639	698	522
75°	6591	508	415
80°	5291	410	340
85°	2739	415	277

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 10273 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	96.5	6.6
10°-20°	251.1	17.3
20°-30°	315.5	21.7
30°-40°	293.9	20.2
40°-50°	225.0	15.5
50°-60°	149.5	10.3
60°-70°	80.6	5.6
70°-80°	33.0	2.3
80°-90°	6.3	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°	663.2	45.7
0°-40°	957.0	65.9
0°-60°	1331.5	91.7
0°-90°	1451.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1451.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1044	1044	1044	1044	1044	
5°	1029	1040	1025	1021	1022	98
15°	976	961	894	842	822	275
25°	878	819	672	560	524	405
35°	749	638	429	304	270	468
45°	602	445	221	130	120	465
55°	448	259	91	63	55	402
65°	296	100	34	25	23	292
75°	142	24	11	10	9	151
85°	20	3	3	3	2	29
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1043.7	1043.7	1043.7	1043.7	1043.7
2.5°	1034.8	1047.7	1036.8	1037.8	1037.8
5°	1028.9	1039.8	1024.9	1021.0	1022.0
7.5°	1021.0	1027.9	1003.2	990.3	988.3
10°	1009.1	1011.1	972.5	949.7	941.8
12.5°	994.3	987.3	936.9	899.3	884.4
15°	976.4	960.6	894.3	841.9	822.1
17.5°	956.7	930.0	845.9	777.6	753.9
20°	932.9	895.3	791.4	706.4	673.7
22.5°	907.2	858.7	734.1	633.2	596.6
25°	878.5	819.1	671.7	559.9	524.3
27.5°	848.8	776.6	610.4	490.7	454.1
30°	817.2	733.1	550.1	423.4	385.8
32.5°	782.5	685.6	487.7	361.1	323.5
35°	748.9	638.1	429.4	303.7	270.1
37.5°	713.3	590.6	373.0	253.3	215.7
40°	677.7	542.1	319.5	203.8	172.1
42.5°	640.1	493.7	269.1	162.2	137.5
45°	602.5	445.2	220.6	129.6	119.7
47.5°	564.9	396.7	178.1	111.8	101.9
50°	525.3	350.2	139.5	95.0	85.1
52.5°	487.7	303.7	108.8	78.2	69.3
55°	448.2	259.2	91.0	63.3	55.4
57.5°	411.6	213.7	75.2	49.5	43.5
60°	372.0	173.1	59.4	38.6	34.6
62.5°	334.4	135.5	45.5	30.7	27.7
65°	295.8	99.9	33.6	24.7	22.8
67.5°	257.2	72.2	25.7	19.8	18.8
70°	216.7	54.4	19.8	15.8	14.8
72.5°	178.1	38.6	14.8	12.9	11.9
75°	141.5	23.7	10.9	9.9	8.9
77.5°	108.8	13.9	7.9	7.9	6.9
80°	76.2	7.9	5.9	5.9	4.9
82.5°	46.5	4.9	4.0	4.0	4.0
85°	19.8	3.0	3.0	3.0	2.0
87.5°	3.0	1.0	1.0	1.0	1.0
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	18.61	19.97	18.98	20.28	20.60	7.19	8.54	7.55	8.86	9.17
	3H	20.36	21.57	20.74	21.90	22.26	7.85	9.05	8.23	9.38	9.75
	4H	21.06	22.19	21.47	22.54	22.92	8.05	9.17	8.45	9.52	9.90
	6H	21.58	22.61	21.99	22.98	23.37	8.17	9.20	8.58	9.57	9.96
	8H	21.72	22.70	22.15	23.09	23.49	8.20	9.18	8.63	9.57	9.98
	12H	21.77	22.71	22.20	23.09	23.52	8.21	9.15	8.64	9.53	9.96
4H	2H	18.42	19.54	18.82	19.89	20.28	7.74	8.87	8.14	9.22	9.60
	3H	20.21	21.13	20.62	21.54	21.94	8.54	9.46	8.95	9.86	10.27
	4H	20.91	21.73	21.34	22.15	22.59	8.80	9.62	9.23	10.04	10.48
	6H	21.48	22.19	21.94	22.63	23.10	8.99	9.70	9.46	10.15	10.62
	8H	21.65	22.32	22.12	22.76	23.23	9.05	9.71	9.52	10.16	10.63
	12H	21.74	22.32	22.22	22.81	23.28	9.08	9.67	9.57	10.15	10.62
8H	4H	20.78	21.45	21.25	21.89	22.36	9.11	9.78	9.58	10.22	10.69
	6H	21.34	21.88	21.84	22.38	22.86	9.36	9.90	9.86	10.39	10.87
	8H	21.51	22.00	22.03	22.51	23.01	9.45	9.93	9.97	10.45	10.94
	12H	21.62	22.05	22.13	22.54	23.11	9.53	9.96	10.04	10.45	11.02
12H	4H	20.74	21.33	21.23	21.81	22.28	9.16	9.74	9.64	10.23	10.70
	6H	21.28	21.77	21.80	22.28	22.77	9.40	9.89	9.92	10.40	10.90
	8H	21.47	21.90	21.99	22.40	22.97	9.53	9.96	10.05	10.45	11.02