

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: P1055621

Luminaire Tested: S123R3DR-S340D935-X4F0-XX-UDD-F-S

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1055621  
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-S340D935-X4F0-XX-UDD-F-S  
Description: DEFINE 3, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
CORE LIGHT ENGINE  
Light Source: 3500K CCT, 90 CRI LEDS  
Ballast/Driver: -

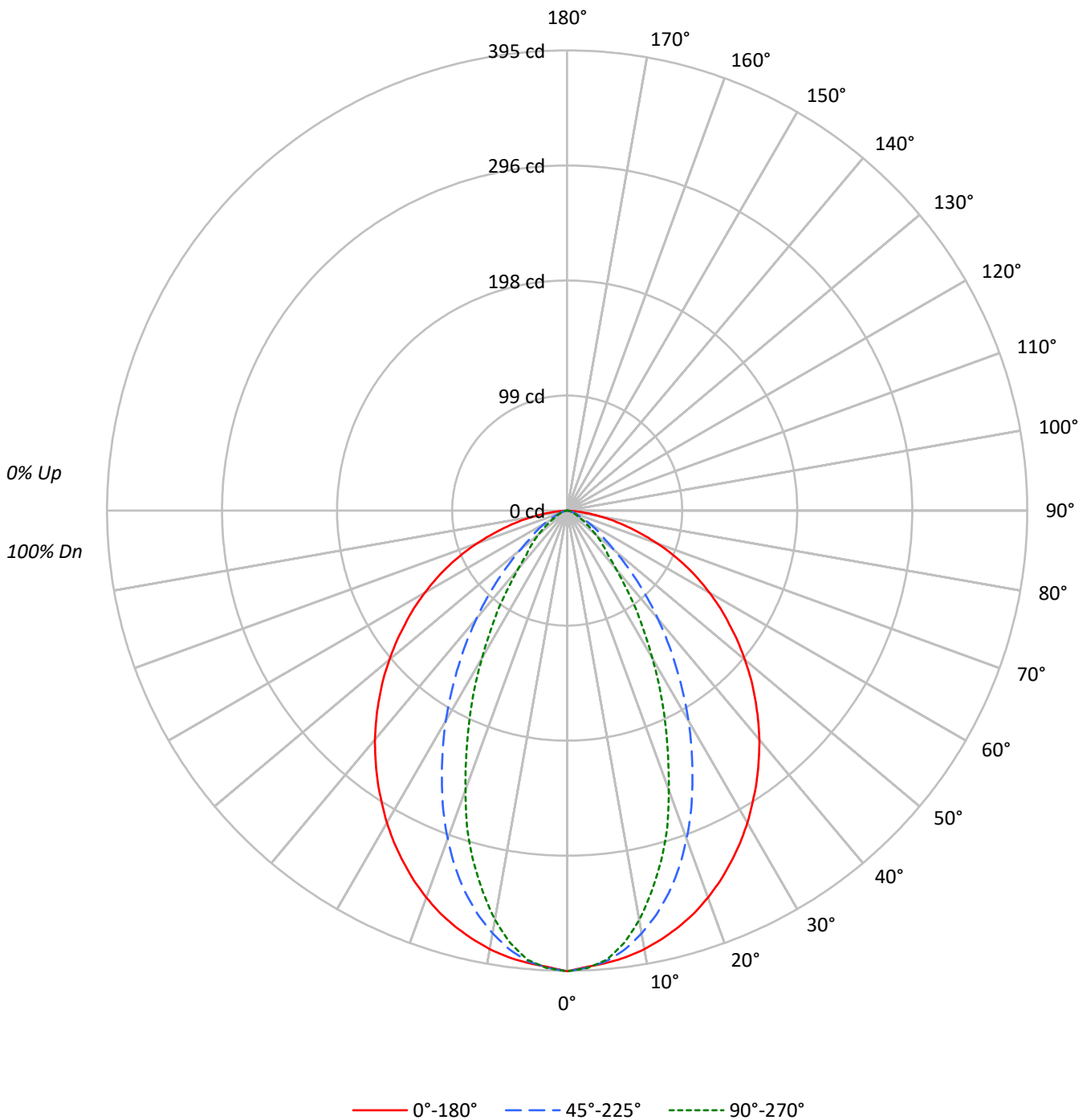
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 549.8 lumens  
Efficiency: N/A  
Efficacy: 43.6 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): 12.6  
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

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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	50	30	10	0		
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100					100			
1	111	108	104	102	109	106	103	100	101	99	97	98	96	94	94	93	91	89					89			
2	104	97	92	87	101	95	90	86	92	88	84	89	85	82	86	83	81	79					79			
3	96	88	81	76	94	86	80	76	84	78	74	81	77	73	79	75	72	70					70			
4	90	80	73	67	88	79	72	67	76	71	66	74	69	65	72	68	64	62					62			
5	84	73	66	60	82	72	65	60	70	64	59	68	63	59	67	62	58	56					56			
6	78	67	60	54	77	66	59	54	65	58	53	63	57	53	62	57	53	51					51			
7	73	62	54	49	72	61	54	49	60	53	49	58	53	48	57	52	48	46					46			
8	69	57	50	45	68	57	50	45	56	49	45	54	49	44	53	48	44	42					42			
9	65	53	46	41	64	53	46	41	52	45	41	51	45	41	50	45	41	39					39			
10	62	50	43	38	60	49	43	38	48	42	38	48	42	38	47	42	38	36					36			

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

	0°	45°	90°
0°	4767	4767	4767
5°	4716	4698	4685
10°	4680	4510	4368
15°	4617	4229	3887
20°	4534	3846	3274
25°	4427	3386	2642
30°	4309	2901	2035
35°	4176	2393	1506
40°	4040	1904	1026
45°	3891	1425	772
50°	3733	990	604
55°	3569	725	441
60°	3397	543	316
65°	3198	362	245
70°	2894	264	197
75°	2497	191	158
80°	2007	153	132
85°	1037	152	97

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 3891 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	36.5	6.6
10°-20°	95.1	17.3
20°-30°	119.5	21.7
30°-40°	111.3	20.2
40°-50°	85.2	15.5
50°-60°	56.6	10.3
60°-70°	30.5	5.6
70°-80°	12.5	2.3
80°-90°	2.4	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°	251.2	45.7
0°-40°	362.5	65.9
0°-60°	504.4	91.7
0°-90°	549.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	549.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	395	395	395	395	395	
5°	390	394	388	387	387	37
15°	370	364	339	319	311	104
25°	333	310	254	212	199	153
35°	284	242	163	115	102	177
45°	228	169	84	49	45	176
55°	170	98	34	24	21	152
65°	112	38	13	9	9	111
75°	54	9	4	4	3	57
85°	8	1	1	1	1	11
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	395.4	395.4	395.4	395.4	395.4
2.5°	392.0	396.9	392.7	393.1	393.1
5°	389.7	393.9	388.2	386.7	387.1
7.5°	386.7	389.4	380.0	375.1	374.4
10°	382.3	383.0	368.4	359.8	356.8
12.5°	376.6	374.0	354.9	340.7	335.0
15°	369.9	363.9	338.8	318.9	311.4
17.5°	362.4	352.3	320.4	294.6	285.6
20°	353.4	339.2	299.8	267.6	255.2
22.5°	343.7	325.3	278.1	239.8	226.0
25°	332.8	310.3	254.5	212.1	198.6
27.5°	321.5	294.2	231.2	185.9	172.0
30°	309.5	277.7	208.4	160.4	146.2
32.5°	296.4	259.7	184.8	136.8	122.5
35°	283.7	241.7	162.6	115.1	102.3
37.5°	270.2	223.7	141.3	95.9	81.7
40°	256.7	205.4	121.0	77.2	65.2
42.5°	242.5	187.0	101.9	61.5	52.1
45°	228.2	168.6	83.6	49.1	45.3
47.5°	214.0	150.3	67.5	42.3	38.6
50°	199.0	132.7	52.8	36.0	32.2
52.5°	184.8	115.1	41.2	29.6	26.2
55°	169.8	98.2	34.5	24.0	21.0
57.5°	155.9	80.9	28.5	18.7	16.5
60°	140.9	65.6	22.5	14.6	13.1
62.5°	126.7	51.3	17.2	11.6	10.5
65°	112.1	37.9	12.7	9.4	8.6
67.5°	97.4	27.4	9.7	7.5	7.1
70°	82.1	20.6	7.5	6.0	5.6
72.5°	67.5	14.6	5.6	4.9	4.5
75°	53.6	9.0	4.1	3.7	3.4
77.5°	41.2	5.2	3.0	3.0	2.6
80°	28.9	3.0	2.2	2.2	1.9
82.5°	17.6	1.9	1.5	1.5	1.5
85°	7.5	1.1	1.1	1.1	0.7
87.5°	1.1	0.4	0.4	0.4	0.4
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	15.24	16.59	15.60	16.91	17.22	3.80	5.16	4.17	5.47	5.79
	3H	16.99	18.20	17.37	18.53	18.89	4.46	5.67	4.84	6.00	6.36
	4H	17.69	18.82	18.09	19.17	19.55	4.66	5.79	5.07	6.14	6.52
	6H	18.20	19.24	18.62	19.61	20.00	4.78	5.82	5.20	6.19	6.58
	8H	18.34	19.32	18.77	19.71	20.12	4.82	5.80	5.25	6.19	6.59
	12H	18.40	19.33	18.83	19.71	20.14	4.83	5.76	5.26	6.15	6.58
4H	2H	15.04	16.17	15.45	16.52	16.90	4.36	5.48	4.76	5.83	6.21
	3H	16.84	17.76	17.25	18.16	18.56	5.16	6.08	5.57	6.48	6.88
	4H	17.53	18.36	17.97	18.78	19.22	5.41	6.24	5.85	6.66	7.10
	6H	18.10	18.81	18.57	19.26	19.73	5.61	6.32	6.07	6.77	7.23
	8H	18.28	18.94	18.75	19.39	19.86	5.66	6.33	6.13	6.77	7.24
	12H	18.37	18.95	18.85	19.43	19.91	5.69	6.28	6.18	6.76	7.23
8H	4H	17.41	18.07	17.88	18.52	18.99	5.73	6.39	6.20	6.84	7.31
	6H	17.96	18.51	18.47	19.00	19.48	5.97	6.51	6.47	7.01	7.49
	8H	18.14	18.63	18.66	19.14	19.63	6.06	6.54	6.58	7.06	7.55
	12H	18.25	18.67	18.76	19.17	19.74	6.13	6.56	6.65	7.06	7.63
12H	4H	17.37	17.95	17.85	18.44	18.91	5.77	6.36	6.26	6.84	7.31
	6H	17.91	18.39	18.43	18.91	19.40	6.02	6.50	6.54	7.02	7.51
	8H	18.10	18.53	18.62	19.02	19.59	6.14	6.57	6.66	7.07	7.64