

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: P1055606

Luminaire Tested: S123R3DR-S340D835-X4F0-XX-UDD-F-S

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1055606  
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-S340D835-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, 80 CRI LEDS  
Ballast/Driver: -

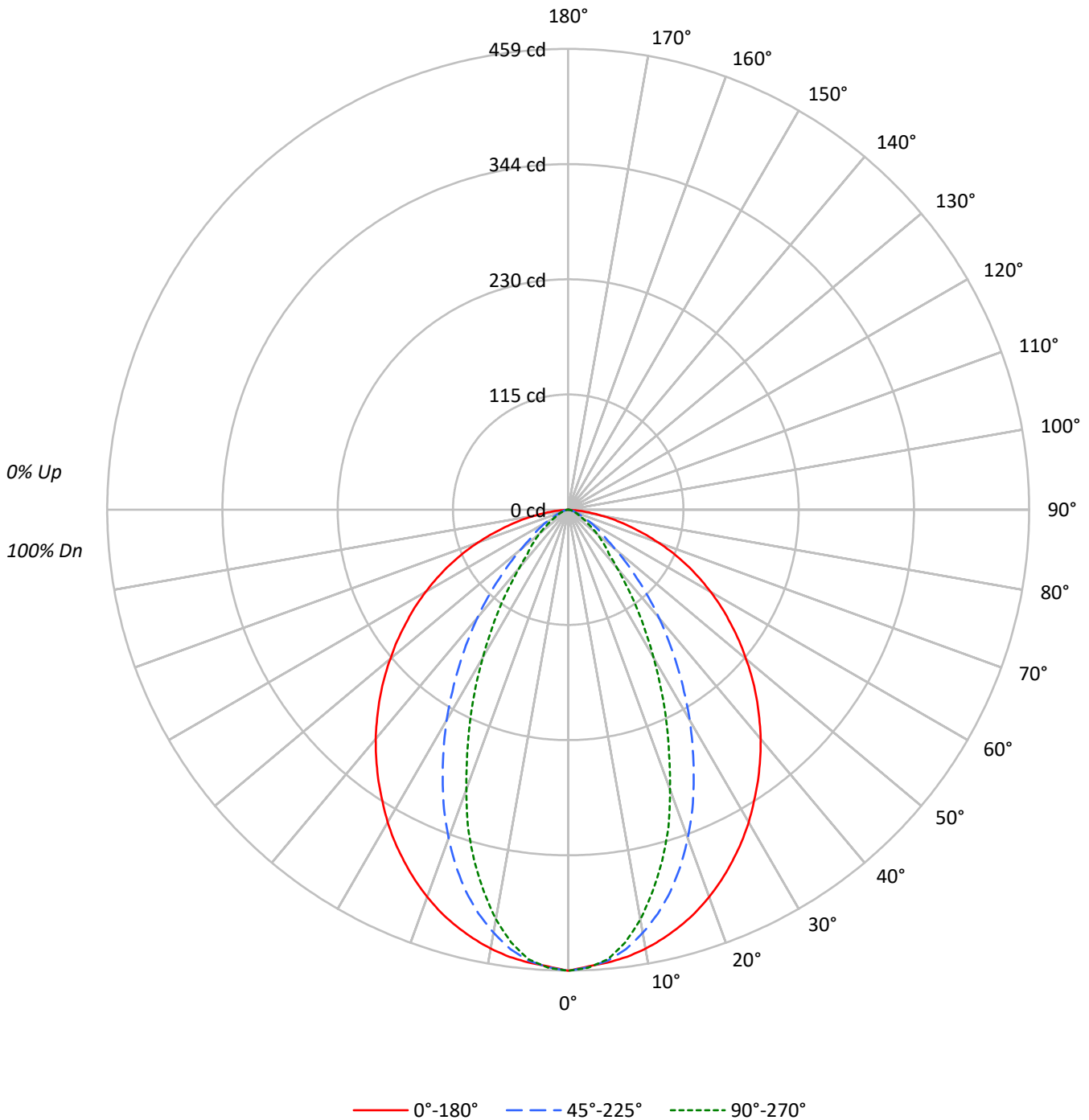
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 638.6 lumens  
Efficiency: N/A  
Efficacy: 50.7 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°	5536	5536	5536
5°	5479	5457	5441
10°	5436	5239	5073
15°	5362	4912	4515
20°	5265	4467	3803
25°	5142	3931	3069
30°	5005	3369	2364
35°	4850	2780	1749
40°	4693	2213	1191
45°	4520	1656	899
50°	4335	1152	701
55°	4145	841	513
60°	3947	629	367
65°	3711	422	285
70°	3359	307	229
75°	2897	224	182
80°	2326	181	153
85°	1203	180	124

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 4520 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	42.4	6.6
10°-20°	110.5	17.3
20°-30°	138.8	21.7
30°-40°	129.3	20.2
40°-50°	99.0	15.5
50°-60°	65.8	10.3
60°-70°	35.5	5.6
70°-80°	14.5	2.3
80°-90°	2.8	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°	291.8	45.7
0°-40°	421.1	65.9
0°-60°	585.8	91.7
0°-90°	638.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	638.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	459	459	459	459	459	
5°	453	458	451	449	450	43
15°	430	423	394	370	362	121
25°	386	360	296	246	231	178
35°	330	281	189	134	119	206
45°	265	196	97	57	53	204
55°	197	114	40	28	24	177
65°	130	44	15	11	10	129
75°	62	10	5	4	4	67
85°	9	1	1	1	1	13
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	459.2	459.2	459.2	459.2	459.2
2.5°	455.3	460.9	456.2	456.6	456.6
5°	452.7	457.5	450.9	449.2	449.6
7.5°	449.2	452.2	441.4	435.7	434.8
10°	444.0	444.8	427.9	417.8	414.4
12.5°	437.4	434.4	412.2	395.6	389.1
15°	429.6	422.6	393.5	370.4	361.7
17.5°	420.9	409.1	372.1	342.1	331.7
20°	410.4	393.9	348.2	310.8	296.4
22.5°	399.1	377.8	323.0	278.6	262.5
25°	386.5	360.4	295.5	246.4	230.7
27.5°	373.5	341.7	268.6	215.9	199.8
30°	359.5	322.5	242.0	186.3	169.8
32.5°	344.3	301.6	214.6	158.9	142.3
35°	329.5	280.7	188.9	133.6	118.8
37.5°	313.8	259.8	164.1	111.4	94.9
40°	298.2	238.5	140.6	89.7	75.7
42.5°	281.6	217.2	118.4	71.4	60.5
45°	265.1	195.9	97.1	57.0	52.7
47.5°	248.5	174.5	78.3	49.2	44.8
50°	231.1	154.1	61.4	41.8	37.4
52.5°	214.6	133.6	47.9	34.4	30.5
55°	197.2	114.0	40.0	27.9	24.4
57.5°	181.1	94.0	33.1	21.8	19.2
60°	163.7	76.2	26.1	17.0	15.2
62.5°	147.1	59.6	20.0	13.5	12.2
65°	130.1	44.0	14.8	10.9	10.0
67.5°	113.2	31.8	11.3	8.7	8.3
70°	95.3	23.9	8.7	7.0	6.5
72.5°	78.3	17.0	6.5	5.7	5.2
75°	62.2	10.4	4.8	4.4	3.9
77.5°	47.9	6.1	3.5	3.5	3.0
80°	33.5	3.5	2.6	2.6	2.2
82.5°	20.5	2.2	1.7	1.7	1.7
85°	8.7	1.3	1.3	1.3	0.9
87.5°	1.3	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	15.76	17.11	16.12	17.43	17.74	4.34	5.70	4.71	6.01	6.33
	3H	17.51	18.72	17.89	19.05	19.41	5.01	6.21	5.39	6.54	6.91
	4H	18.21	19.33	18.61	19.69	20.07	5.20	6.33	5.61	6.68	7.06
	6H	18.72	19.76	19.14	20.13	20.52	5.32	6.36	5.74	6.72	7.12
	8H	18.86	19.84	19.29	20.23	20.64	5.35	6.33	5.78	6.72	7.13
	12H	18.92	19.85	19.35	20.23	20.67	5.36	6.30	5.80	6.68	7.11
4H	2H	15.57	16.69	15.97	17.04	17.42	4.90	6.02	5.30	6.37	6.76
	3H	17.36	18.28	17.77	18.68	19.09	5.70	6.62	6.11	7.02	7.42
	4H	18.05	18.88	18.49	19.29	19.74	5.96	6.78	6.39	7.20	7.64
	6H	18.62	19.33	19.09	19.78	20.25	6.15	6.86	6.62	7.31	7.77
	8H	18.80	19.46	19.27	19.91	20.38	6.20	6.87	6.67	7.31	7.78
	12H	18.89	19.47	19.37	19.95	20.43	6.24	6.82	6.72	7.30	7.78
8H	4H	17.93	18.59	18.40	19.04	19.51	6.27	6.93	6.74	7.38	7.85
	6H	18.48	19.03	18.99	19.52	20.00	6.51	7.06	7.02	7.55	8.03
	8H	18.66	19.15	19.18	19.66	20.15	6.60	7.08	7.12	7.60	8.09
	12H	18.77	19.19	19.28	19.69	20.26	6.68	7.11	7.19	7.60	8.17
12H	4H	17.89	18.47	18.37	18.96	19.43	6.31	6.90	6.80	7.38	7.86
	6H	18.43	18.91	18.95	19.43	19.92	6.56	7.05	7.08	7.56	8.05
	8H	18.62	19.05	19.14	19.54	20.11	6.68	7.11	7.19	7.60	8.17