

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: P1055613

Luminaire Tested: S123R3DR-S340D850-X4F0-XX-UDD-F-W

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1055613  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-4)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/25/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123R3DR-S340D850-X4F0-XX-UDD-F-W  
Description: DEFINE 3, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
CORE LIGHT ENGINE  
Light Source: 5000K CCT, 80 CRI LEDS  
Ballast/Driver: -

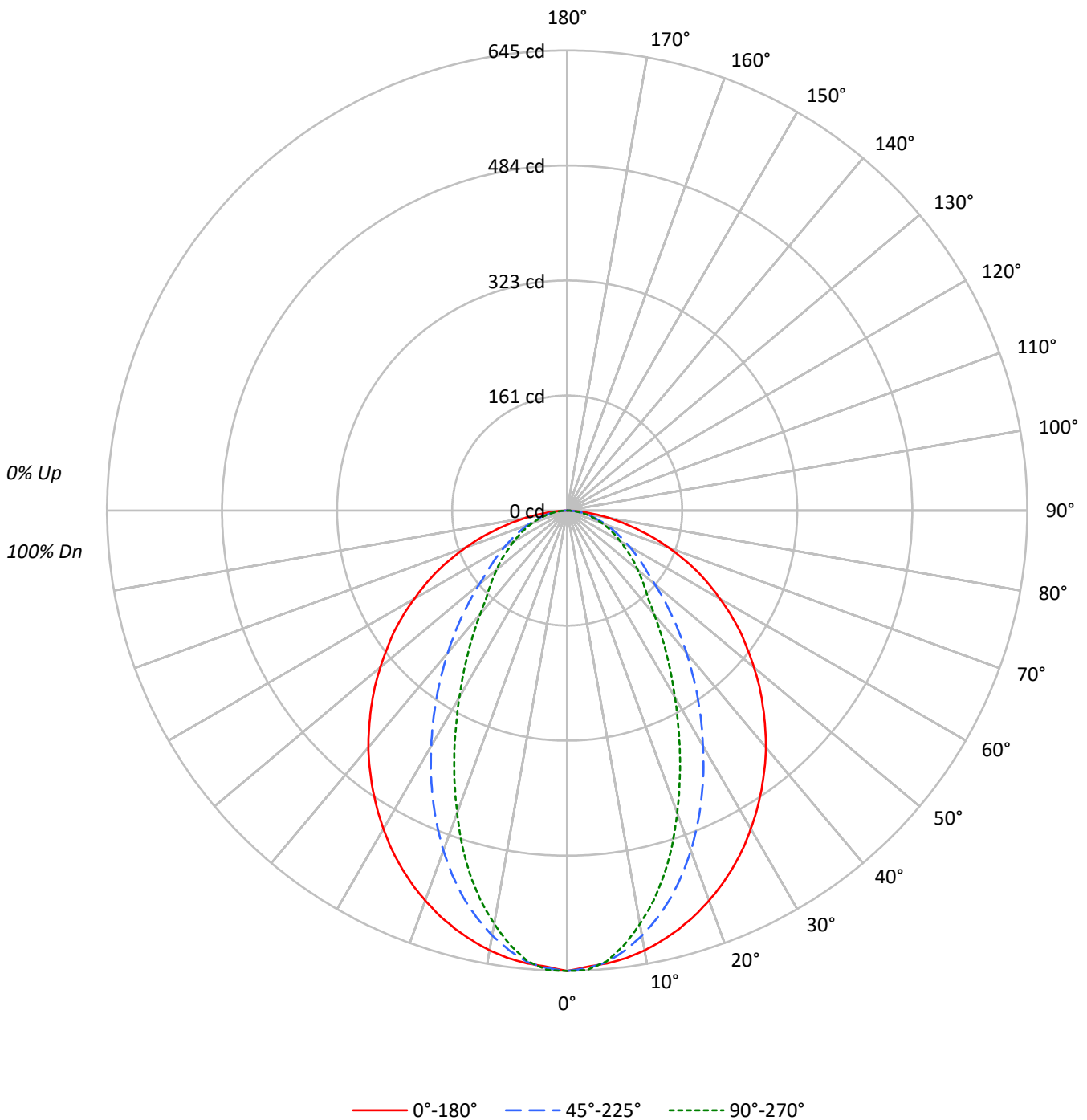
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1131.9 lumens  
Efficiency: N/A  
Efficacy: 89.8 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 0.83 / 1.02  
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 (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	110	106	102	99	107	104	100	97	99	97	94	96	93	91	92	90	88	86
2	101	94	88	83	99	92	87	82	89	84	80	85	82	78	83	79	76	74
3	93	84	77	71	91	82	76	70	80	74	69	77	72	68	74	70	67	65
4	86	75	68	61	84	74	67	61	72	65	60	70	64	59	67	63	59	57
5	80	68	60	54	78	67	60	54	65	58	53	63	57	53	62	56	52	50
6	75	62	54	48	73	61	54	48	60	53	48	58	52	47	57	51	47	45
7	70	57	49	43	68	56	49	43	55	48	43	53	47	43	52	47	42	40
8	65	53	45	39	64	52	44	39	51	44	39	49	43	39	48	43	39	37
9	61	49	41	36	60	48	41	36	47	40	36	46	40	35	45	39	35	34
10	58	45	38	33	56	45	38	33	44	37	33	43	37	33	42	37	33	31

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

	0°	45°	90°
0°	7781	7781	7781
5°	7712	7694	7677
10°	7665	7404	7203
15°	7574	7013	6579
20°	7463	6509	5784
25°	7332	5926	4977
30°	7170	5303	4207
35°	6998	4689	3553
40°	6823	4095	2986
45°	6617	3531	2634
50°	6411	3007	2418
55°	6220	2678	2232
60°	5958	2421	2083
65°	5714	2217	1954
70°	5326	2041	1837
75°	4765	1887	1733
80°	4089	1743	1611
85°	2877	1605	1535

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 6617 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	59.8	5.3
10°-20°	158.3	14.0
20°-30°	208.5	18.4
30°-40°	211.6	18.7
40°-50°	183.9	16.3
50°-60°	144.1	12.7
60°-70°	97.9	8.6
70°-80°	53.1	4.7
80°-90°	14.6	1.3
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°	426.6	37.7
0°-40°	638.2	56.4
0°-60°	966.3	85.4
0°-90°	1131.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1131.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	645	645	645	645	645	
5°	637	645	636	630	634	60
15°	607	598	562	534	527	171
25°	551	518	446	390	374	254
35°	476	419	319	258	241	297
45°	388	311	207	160	154	300
55°	296	206	127	109	106	264
65°	200	111	78	70	68	198
75°	102	51	40	38	37	109
85°	21	13	12	11	11	26
90°	0	0	0	0	0	

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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	645.4	645.4	645.4	645.4	645.4
2.5°	640.1	648.3	642.0	642.5	644.4
5°	637.2	644.9	635.7	629.9	634.3
7.5°	632.8	638.6	621.7	612.5	614.0
10°	626.1	628.0	604.8	590.3	588.4
12.5°	616.9	613.5	584.6	563.3	559.9
15°	606.8	598.1	561.9	534.4	527.1
17.5°	595.2	580.7	535.3	501.5	490.4
20°	581.7	561.4	507.3	464.4	450.8
22.5°	567.2	541.1	476.9	426.2	412.2
25°	551.2	517.9	445.5	390.0	374.1
27.5°	533.9	494.8	413.7	354.3	336.4
30°	515.0	470.6	380.9	319.5	302.2
32.5°	495.7	445.1	349.5	287.2	270.3
35°	475.5	419.0	318.6	257.8	241.4
37.5°	454.7	392.4	288.7	229.8	214.3
40°	433.5	365.4	260.2	203.7	189.7
42.5°	410.8	338.4	232.7	179.1	168.5
45°	388.1	311.3	207.1	159.8	154.5
47.5°	365.4	283.8	182.9	146.3	141.4
50°	341.8	257.3	160.3	133.7	128.9
52.5°	318.6	231.2	141.4	121.6	118.3
55°	295.9	205.6	127.4	108.6	106.2
57.5°	272.2	180.5	113.4	98.5	95.6
60°	247.1	156.4	100.4	87.9	86.4
62.5°	224.5	133.7	88.8	78.7	77.2
65°	200.3	111.0	77.7	69.5	68.5
67.5°	175.7	92.2	67.6	60.8	60.3
70°	151.1	77.7	57.9	52.6	52.1
72.5°	127.0	64.2	48.8	45.4	44.4
75°	102.3	51.2	40.5	37.7	37.2
77.5°	80.1	39.6	32.3	30.4	29.9
80°	58.9	29.4	25.1	23.7	23.2
82.5°	38.6	20.3	17.9	16.9	16.9
85°	20.8	12.6	11.6	10.6	11.1
87.5°	7.2	5.3	5.3	4.8	5.3
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	17.69	19.18	18.05	19.49	19.81	12.84	14.33	13.20	14.64	14.96
	3H	19.57	20.91	19.95	21.24	21.60	14.46	15.80	14.84	16.13	16.49
	4H	20.33	21.58	20.73	21.93	22.31	15.10	16.36	15.50	16.71	17.08
	6H	20.89	22.05	21.31	22.42	22.81	15.59	16.75	16.00	17.12	17.51
	8H	21.07	22.17	21.49	22.56	22.96	15.76	16.86	16.19	17.25	17.66
	12H	21.16	22.22	21.59	22.60	23.03	15.89	16.94	16.32	17.32	17.75
4H	2H	17.73	18.99	18.13	19.34	19.72	13.56	14.82	13.96	15.17	15.55
	3H	19.75	20.79	20.16	21.19	21.59	15.38	16.43	15.80	16.83	17.23
	4H	20.57	21.51	21.00	21.92	22.36	16.13	17.07	16.56	17.49	17.93
	6H	21.25	22.07	21.71	22.51	22.97	16.74	17.56	17.20	18.00	18.46
	8H	21.48	22.24	21.94	22.69	23.16	16.96	17.72	17.42	18.16	18.63
	12H	21.63	22.31	22.11	22.79	23.26	17.12	17.81	17.61	18.28	18.76
8H	4H	20.59	21.35	21.05	21.80	22.27	16.51	17.28	16.98	17.72	18.19
	6H	21.32	21.95	21.82	22.44	22.92	17.24	17.87	17.74	18.37	18.84
	8H	21.59	22.15	22.10	22.67	23.15	17.53	18.10	18.05	18.61	19.10
	12H	21.80	22.30	22.31	22.79	23.36	17.78	18.28	18.29	18.77	19.33
12H	4H	20.58	21.26	21.06	21.74	22.21	16.57	17.25	17.05	17.73	18.20
	6H	21.30	21.87	21.82	22.38	22.87	17.33	17.89	17.84	18.40	18.89
	8H	21.61	22.11	22.12	22.60	23.17	17.67	18.17	18.18	18.67	19.23