

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: P1055614

Luminaire Tested: S123R3DR-S340D927-X4F0-XX-UDD-F-B

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1055614  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-5)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/25/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123R3DR-S340D927-X4F0-XX-UDD-F-B  
Description: DEFINE 3, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
CORE LIGHT ENGINE  
Light Source: 2700K CCT, 90 CRI LEDS  
Ballast/Driver: -

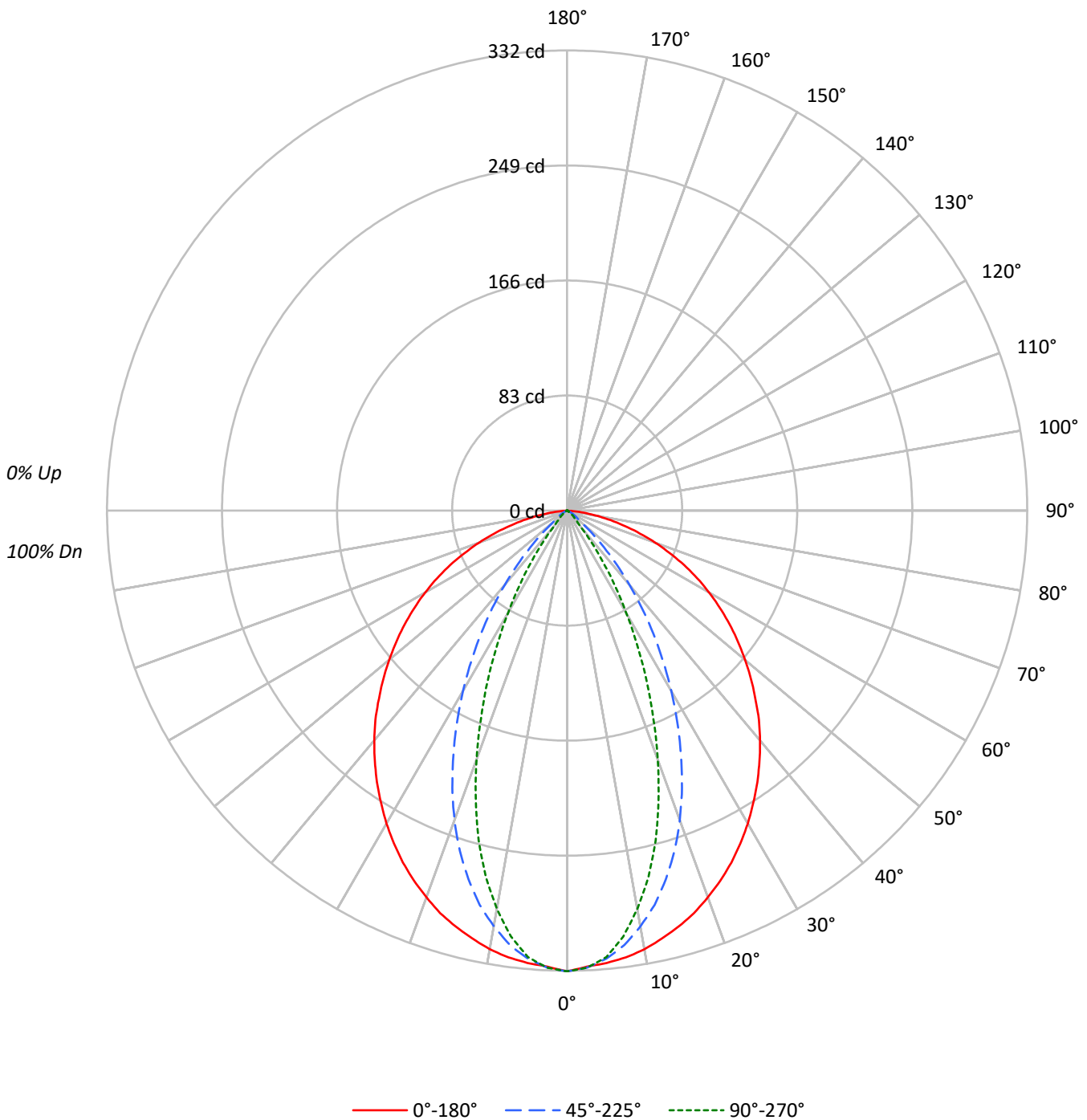
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 389.0 lumens  
Efficiency: N/A  
Efficacy: 30.9 lumens/watt  
Spacing Criteria (0/90/45): 1.17 / 0.7 / 0.86  
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
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102
1	112	108	105	103	109	106	104	101	102	100	98	98	97	95	95	93	92
2	105	99	94	89	102	97	92	88	93	90	86	90	87	84	88	85	83
3	98	90	84	79	96	88	83	78	86	81	77	83	79	76	81	77	74
4	92	82	75	70	90	81	75	70	79	73	69	77	72	68	75	71	67
5	86	76	69	63	84	75	68	63	73	67	62	71	66	62	69	65	61
6	81	70	63	58	79	69	62	57	67	61	57	66	61	56	64	60	56
7	76	65	58	53	74	64	57	52	63	57	52	61	56	52	60	55	52
8	71	60	53	48	70	60	53	48	58	52	48	57	52	48	56	51	48
9	68	56	49	45	66	56	49	45	55	49	45	54	48	44	53	48	44
10	64	53	46	42	63	52	46	42	51	46	41	51	45	41	50	45	41

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

	0°	45°	90°
0°	4008	4008	4008
5°	3965	3927	3914
10°	3935	3728	3571
15°	3878	3435	3077
20°	3809	3048	2451
25°	3729	2582	1808
30°	3629	2092	1186
35°	3522	1594	649
40°	3407	1102	222
45°	3275	641	130
50°	3144	251	77
55°	3008	160	36
60°	2853	99	17
65°	2656	48	9
70°	2383	25	11
75°	2022	14	14
80°	1507	21	0
85°	567	0	0

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 3275 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	30.5	7.8
10°-20°	77.3	19.9
20°-30°	92.3	23.7
30°-40°	78.3	20.1
40°-50°	53.2	13.7
50°-60°	33.0	8.5
60°-70°	16.7	4.3
70°-80°	6.8	1.7
80°-90°	1.0	0.3
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°	200.1	51.4
0°-40°	278.3	71.6
0°-60°	364.5	93.7
0°-90°	389.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	389.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	332	332	332	332	332	
5°	328	331	324	322	323	31
15°	311	303	275	253	246	88
25°	280	254	194	150	136	129
35°	239	192	108	58	44	150
45°	192	126	38	9	8	148
55°	143	63	8	3	2	128
65°	93	16	2	0	0	92
75°	43	3	0	0	0	46
85°	4	0	0	0	0	7
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	332.4	332.4	332.4	332.4	332.4
2.5°	329.3	333.8	330.0	329.6	330.0
5°	327.6	330.7	324.5	322.0	323.4
7.5°	325.1	326.5	316.2	310.0	310.0
10°	321.4	320.3	304.5	294.1	291.7
12.5°	316.2	312.0	291.4	275.2	270.7
15°	310.7	302.7	275.2	253.4	246.5
17.5°	304.5	292.4	257.6	229.3	219.3
20°	296.9	280.7	237.6	203.1	191.0
22.5°	288.9	267.9	216.5	176.2	162.7
25°	280.3	254.1	194.1	150.0	135.9
27.5°	270.7	239.6	172.1	124.8	109.3
30°	260.7	224.5	150.3	100.7	85.2
32.5°	250.0	208.6	128.6	78.6	64.1
35°	239.3	192.1	108.3	58.3	44.1
37.5°	227.9	175.5	88.6	40.3	27.9
40°	216.5	159.3	70.0	25.5	14.1
42.5°	204.8	142.4	53.1	12.8	9.7
45°	192.1	125.9	37.6	9.3	7.6
47.5°	180.0	110.0	24.8	7.6	5.9
50°	167.6	94.1	13.4	5.5	4.1
52.5°	155.2	79.0	9.7	4.1	2.8
55°	143.1	63.4	7.6	2.8	1.7
57.5°	130.7	50.0	5.9	1.7	1.0
60°	118.3	36.9	4.1	1.0	0.7
62.5°	105.9	25.5	2.8	0.7	0.3
65°	93.1	15.5	1.7	0.3	0.3
67.5°	80.0	10.7	1.0	0.3	0.3
70°	67.6	7.6	0.7	0.3	0.3
72.5°	55.2	4.8	0.3	0.3	0.0
75°	43.4	2.8	0.3	0.3	0.3
77.5°	32.1	1.0	0.3	0.3	0.0
80°	21.7	0.3	0.3	0.3	0.0
82.5°	12.1	0.0	0.3	0.3	0.0
85°	4.1	0.0	0.0	0.3	0.0
87.5°	0.0	0.0	0.0	0.3	0.0
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	13.87	15.15	14.24	15.47	15.78	0.00	0.00	0.00	0.00	0.00
	3H	15.82	16.95	16.20	17.28	17.65	0.00	0.00	0.00	0.00	0.00
	4H	16.64	17.70	17.05	18.05	18.44	0.00	0.00	0.00	0.00	0.00
	6H	17.20	18.17	17.61	18.54	18.93	0.00	0.00	0.00	0.00	0.00
	8H	17.32	18.24	17.76	18.63	19.04	0.00	0.00	0.00	0.00	0.00
	12H	17.35	18.22	17.78	18.61	19.04	0.00	0.00	0.00	0.00	0.00
4H	2H	13.64	14.69	14.04	15.04	15.43	0.00	0.00	0.00	0.00	0.00
	3H	15.59	16.45	16.00	16.86	17.26	0.00	0.00	0.00	0.00	0.00
	4H	16.40	17.17	16.84	17.59	18.04	0.00	0.00	0.00	0.00	0.00
	6H	17.00	17.67	17.47	18.11	18.58	0.00	0.00	0.00	0.00	0.00
	8H	17.16	17.77	17.63	18.22	18.69	0.00	0.00	0.00	0.00	0.00
	12H	17.20	17.75	17.69	18.23	18.70	0.00	0.00	0.00	0.00	0.00
8H	4H	16.26	16.88	16.73	17.33	17.80	0.00	0.00	0.00	0.00	0.00
	6H	16.84	17.34	17.34	17.84	18.32	0.00	0.00	0.00	0.00	0.00
	8H	16.99	17.44	17.51	17.96	18.45	0.00	0.00	0.00	0.00	0.00
	12H	17.05	17.44	17.56	17.94	18.51	0.00	0.00	0.00	0.00	0.00
12H	4H	16.21	16.76	16.70	17.24	17.71	0.00	0.00	0.00	0.00	0.00
	6H	16.78	17.23	17.30	17.74	18.24	0.00	0.00	0.00	0.00	0.00
	8H	16.95	17.34	17.46	17.84	18.41	0.00	0.00	0.00	0.00	0.00