

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: P1055616

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

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1055616  
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-S340D927-X4F0-XX-UDD-F-W  
Description: DEFINE 3, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
CORE LIGHT ENGINE  
Light Source: 2700K CCT, 90 CRI LEDS  
Ballast/Driver: -

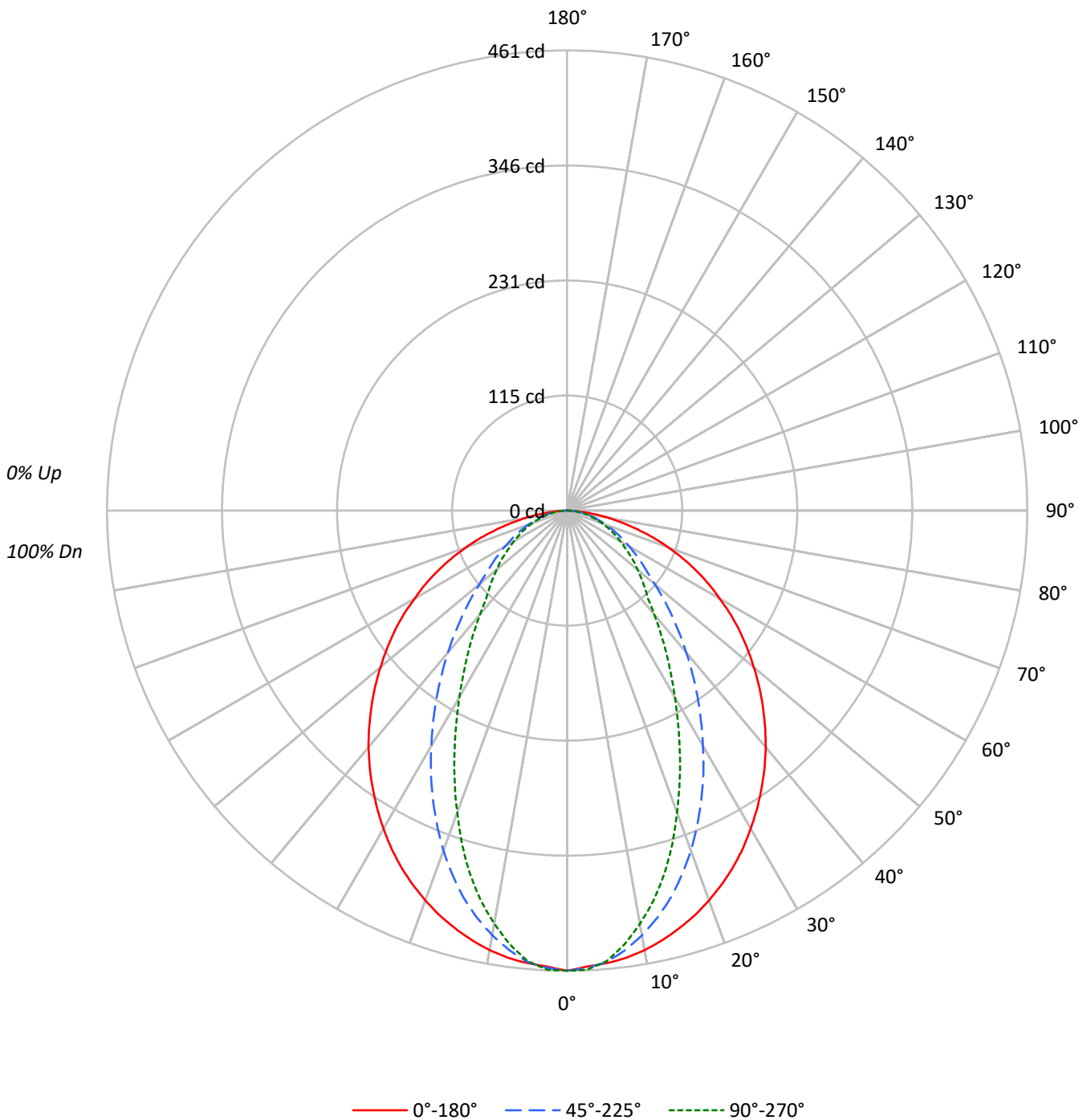
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 808.5 lumens  
Efficiency: N/A  
Efficacy: 64.2 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°	5558	5558	5558
5°	5508	5496	5484
10°	5475	5289	5145
15°	5410	5010	4699
20°	5331	4650	4131
25°	5239	4234	3555
30°	5122	3787	3004
35°	4998	3350	2537
40°	4873	2924	2133
45°	4726	2522	1881
50°	4578	2148	1727
55°	4444	1913	1595
60°	4256	1729	1488
65°	4082	1583	1398
70°	3804	1459	1311
75°	3405	1351	1234
80°	2923	1243	1153
85°	2047	1148	1093

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 4726 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	42.7	5.3
10°-20°	113.1	14.0
20°-30°	148.9	18.4
30°-40°	151.2	18.7
40°-50°	131.4	16.2
50°-60°	103.0	12.7
60°-70°	69.9	8.7
70°-80°	37.9	4.7
80°-90°	10.4	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°	304.7	37.7
0°-40°	455.9	56.4
0°-60°	690.2	85.4
0°-90°	808.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	808.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	461	461	461	461	461	
5°	455	461	454	450	453	43
15°	433	427	401	382	376	122
25°	394	370	318	279	267	181
35°	340	299	228	184	172	212
45°	277	222	148	114	110	214
55°	211	147	91	78	76	189
65°	143	79	56	50	49	141
75°	73	36	29	27	26	78
85°	15	9	8	8	8	19
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	461.0	461.0	461.0	461.0	461.0
2.5°	457.2	463.1	458.6	458.9	460.3
5°	455.1	460.7	454.1	450.0	453.1
7.5°	452.0	456.2	444.1	437.6	438.6
10°	447.2	448.6	432.0	421.7	420.3
12.5°	440.7	438.2	417.6	402.4	400.0
15°	433.4	427.2	401.4	381.7	376.5
17.5°	425.1	414.8	382.4	358.3	350.3
20°	415.5	401.0	362.4	331.7	322.0
22.5°	405.1	386.5	340.7	304.5	294.5
25°	393.8	370.0	318.3	278.6	267.2
27.5°	381.4	353.4	295.5	253.1	240.3
30°	367.9	336.2	272.0	228.3	215.8
32.5°	354.1	317.9	249.6	205.2	193.1
35°	339.6	299.3	227.6	184.1	172.4
37.5°	324.8	280.3	206.2	164.1	153.1
40°	309.6	261.0	185.8	145.5	135.5
42.5°	293.4	241.7	166.2	127.9	120.3
45°	277.2	222.4	147.9	114.1	110.3
47.5°	261.0	202.7	130.7	104.5	101.0
50°	244.1	183.8	114.5	95.5	92.1
52.5°	227.6	165.2	101.0	86.9	84.5
55°	211.4	146.9	91.0	77.6	75.9
57.5°	194.5	129.0	81.0	70.3	68.3
60°	176.5	111.7	71.7	62.8	61.7
62.5°	160.3	95.5	63.4	56.2	55.2
65°	143.1	79.3	55.5	49.7	49.0
67.5°	125.5	65.9	48.3	43.4	43.1
70°	107.9	55.5	41.4	37.6	37.2
72.5°	90.7	45.9	34.8	32.4	31.7
75°	73.1	36.5	29.0	26.9	26.5
77.5°	57.2	28.3	23.1	21.7	21.4
80°	42.1	21.0	17.9	16.9	16.6
82.5°	27.6	14.5	12.8	12.1	12.1
85°	14.8	9.0	8.3	7.6	7.9
87.5°	5.2	3.8	3.8	3.4	3.8
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	16.52	18.01	16.88	18.32	18.64	11.66	13.16	12.03	13.47	13.78
	3H	18.41	19.74	18.78	20.07	20.43	13.29	14.63	13.67	14.96	15.32
	4H	19.16	20.42	19.56	20.77	21.14	13.93	15.18	14.33	15.53	15.91
	6H	19.73	20.89	20.14	21.25	21.64	14.42	15.58	14.83	15.95	16.34
	8H	19.90	21.00	20.33	21.39	21.79	14.59	15.69	15.02	16.08	16.49
	12H	20.00	21.05	20.43	21.43	21.86	14.71	15.77	15.15	16.15	16.58
4H	2H	16.57	17.82	16.97	18.17	18.55	12.39	13.65	12.79	14.00	14.38
	3H	18.58	19.63	18.99	20.03	20.43	14.21	15.26	14.62	15.66	16.06
	4H	19.40	20.34	19.83	20.75	21.19	14.96	15.90	15.39	16.32	16.75
	6H	20.08	20.90	20.54	21.34	21.80	15.57	16.39	16.03	16.83	17.29
	8H	20.31	21.08	20.78	21.52	21.99	15.79	16.55	16.25	16.99	17.46
	12H	20.46	21.15	20.95	21.62	22.10	15.95	16.64	16.44	17.11	17.59
8H	4H	19.42	20.19	19.89	20.63	21.10	15.34	16.11	15.81	16.55	17.02
	6H	20.15	20.78	20.65	21.27	21.75	16.07	16.70	16.57	17.20	17.67
	8H	20.42	20.99	20.94	21.50	21.99	16.36	16.93	16.88	17.44	17.93
	12H	20.63	21.13	21.14	21.62	22.19	16.61	17.11	17.12	17.60	18.16
12H	4H	19.41	20.09	19.89	20.57	21.04	15.40	16.08	15.88	16.56	17.03
	6H	20.14	20.70	20.65	21.21	21.70	16.16	16.72	16.67	17.23	17.72
	8H	20.44	20.94	20.95	21.43	22.00	16.50	17.00	17.01	17.50	18.06