

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: P1055563

Luminaire Tested: S123R3DR-S1000D930-X4F0-XX-UDD-F-B

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1055563  
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-S1000D930-X4F0-XX-UDD-F-B  
Description: DEFINE 3, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
CORE LIGHT ENGINE  
Light Source: 3000K CCT, 90 CRI LEDS  
Ballast/Driver: -

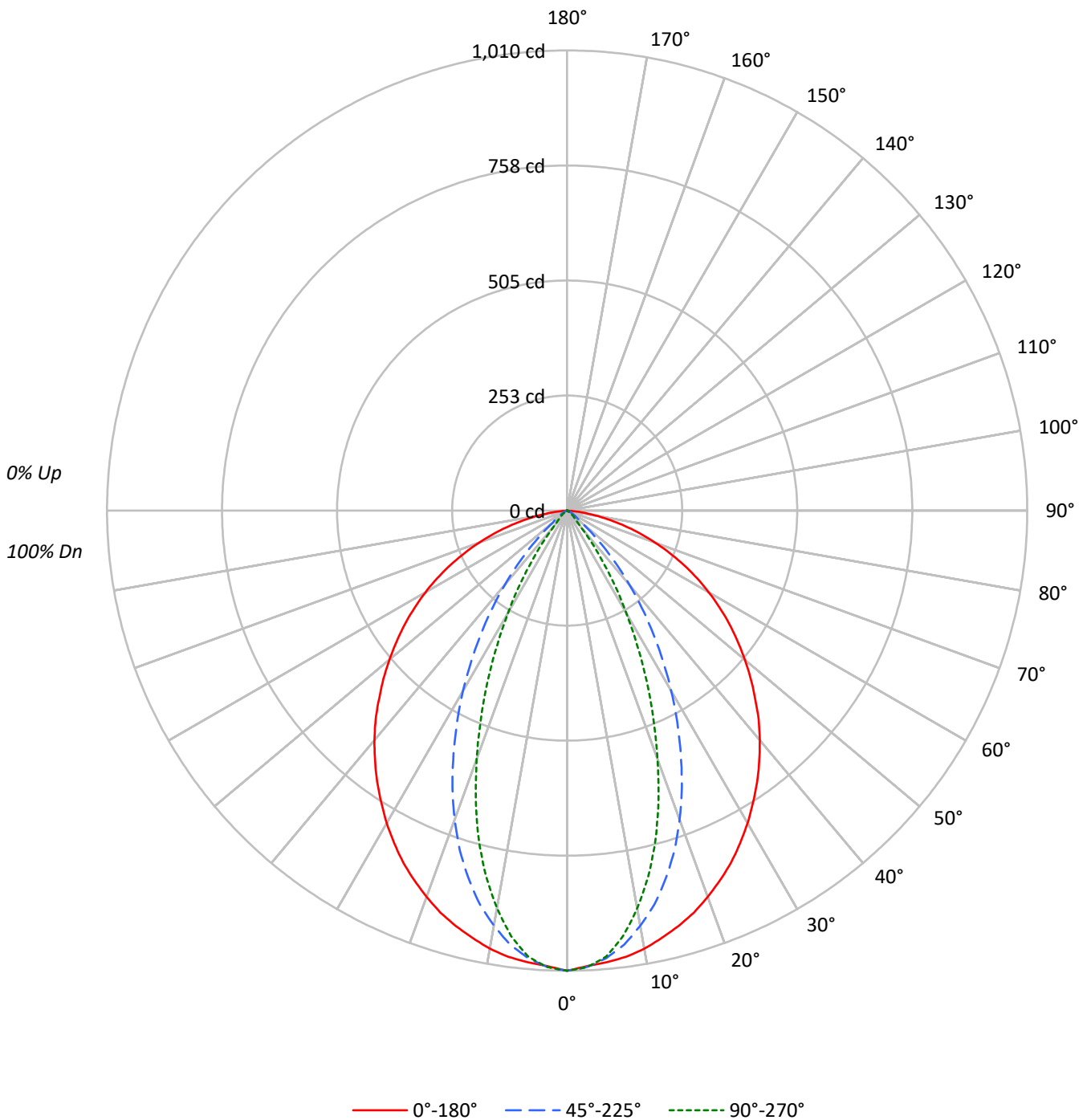
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1182.0 lumens  
Efficiency: N/A  
Efficacy: 34.1 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): 34.7  
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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	112	108	105	103	109	106	104	101	102	100	98	98	97	95	95	93	92	90
2	105	99	94	89	102	97	92	88	93	90	86	90	87	84	87	85	83	81
3	98	90	84	79	96	88	83	78	86	81	77	83	79	76	81	77	74	73
4	92	82	75	70	90	81	75	70	79	73	69	77	72	68	75	71	67	65
5	86	76	69	63	84	75	68	63	73	67	62	71	66	62	69	65	61	59
6	81	70	63	58	79	69	62	57	67	61	57	66	61	56	64	60	56	54
7	76	65	58	53	74	64	57	52	63	57	52	61	56	52	60	55	52	50
8	71	60	53	48	70	60	53	48	58	52	48	57	52	48	56	51	48	46
9	68	56	49	45	66	56	49	45	55	49	45	54	48	44	53	48	44	43
10	64	53	46	42	63	52	46	42	51	46	41	51	45	41	50	45	41	40

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

	0°	45°	90°
0°	12177	12177	12177
5°	12046	11932	11894
10°	11955	11325	10852
15°	11783	10436	9350
20°	11574	9262	7447
25°	11331	7847	5491
30°	11027	6359	3603
35°	10702	4842	1974
40°	10356	3348	677
45°	9951	1947	392
50°	9551	767	236
55°	9139	483	109
60°	8666	304	51
65°	8071	148	29
70°	7240	74	35
75°	6149	47	47
80°	4582	69	0
85°	1743	0	0

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 9951 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	92.6	7.8
10°-20°	235.0	19.9
20°-30°	280.3	23.7
30°-40°	237.8	20.1
40°-50°	161.6	13.7
50°-60°	100.2	8.5
60°-70°	50.7	4.3
70°-80°	20.7	1.7
80°-90°	3.2	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°	607.9	51.4
0°-40°	845.7	71.5
0°-60°	1107.5	93.7
0°-90°	1182.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1182.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1010	1010	1010	1010	1010	
5°	995	1005	986	979	983	94
15°	944	920	836	770	749	266
25°	852	772	590	456	413	392
35°	727	584	329	177	134	454
45°	584	382	114	28	23	451
55°	435	193	23	8	5	388
65°	283	47	5	1	1	279
75°	132	8	1	1	1	140
85°	13	0	0	1	0	22
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1010.0	1010.0	1010.0	1010.0	1010.0
2.5°	1000.6	1014.2	1002.7	1001.6	1002.7
5°	995.3	1004.8	985.9	978.6	982.8
7.5°	988.0	992.2	960.7	941.9	941.9
10°	976.5	973.3	925.1	893.7	886.4
12.5°	960.7	948.2	885.3	836.1	822.5
15°	944.0	919.9	836.1	770.1	749.1
17.5°	925.1	888.5	782.6	696.7	666.3
20°	902.1	852.8	721.9	617.1	580.4
22.5°	878.0	814.1	658.0	535.4	494.5
25°	851.8	772.2	589.9	455.8	412.8
27.5°	822.5	728.2	522.8	379.3	332.1
30°	792.1	682.1	456.8	305.9	258.8
32.5°	759.6	633.9	390.8	238.9	194.9
35°	727.1	583.6	329.0	177.1	134.1
37.5°	692.5	533.3	269.3	122.6	84.9
40°	658.0	484.0	212.7	77.5	43.0
42.5°	622.3	432.7	161.3	38.8	29.3
45°	583.6	382.4	114.2	28.3	23.0
47.5°	546.9	334.2	75.4	23.0	17.8
50°	509.2	286.0	40.9	16.8	12.6
52.5°	471.5	239.9	29.3	12.6	8.4
55°	434.8	192.8	23.0	8.4	5.2
57.5°	397.1	151.9	17.8	5.2	3.1
60°	359.4	112.1	12.6	3.1	2.1
62.5°	321.6	77.5	8.4	2.1	1.0
65°	282.9	47.1	5.2	1.0	1.0
67.5°	243.1	32.5	3.1	1.0	1.0
70°	205.4	23.0	2.1	1.0	1.0
72.5°	167.6	14.7	1.0	1.0	0.0
75°	132.0	8.4	1.0	1.0	1.0
77.5°	97.4	3.1	1.0	1.0	0.0
80°	66.0	1.0	1.0	1.0	0.0
82.5°	36.7	0.0	1.0	1.0	0.0
85°	12.6	0.0	0.0	1.0	0.0
87.5°	0.0	0.0	0.0	1.0	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	17.73	19.01	18.10	19.33	19.64	0.00	0.00	0.00	0.00	0.00
	3H	19.68	20.81	20.06	21.14	21.51	0.00	0.00	0.00	0.00	0.00
	4H	20.50	21.56	20.91	21.91	22.30	0.00	0.00	0.00	0.00	0.00
	6H	21.06	22.03	21.47	22.40	22.79	0.00	0.00	0.00	0.00	0.00
	8H	21.18	22.10	21.61	22.49	22.90	0.00	0.00	0.00	0.00	0.00
	12H	21.21	22.08	21.64	22.47	22.90	0.00	0.00	0.00	0.00	0.00
4H	2H	17.50	18.55	17.90	18.90	19.29	0.00	0.00	0.00	0.00	0.00
	3H	19.45	20.31	19.86	20.72	21.12	0.00	0.00	0.00	0.00	0.00
	4H	20.26	21.03	20.70	21.45	21.90	0.00	0.00	0.00	0.00	0.00
	6H	20.86	21.53	21.33	21.97	22.44	0.00	0.00	0.00	0.00	0.00
	8H	21.02	21.63	21.49	22.08	22.55	0.00	0.00	0.00	0.00	0.00
	12H	21.06	21.61	21.55	22.09	22.56	0.00	0.00	0.00	0.00	0.00
8H	4H	20.12	20.74	20.59	21.19	21.66	0.00	0.00	0.00	0.00	0.00
	6H	20.70	21.20	21.20	21.70	22.18	0.00	0.00	0.00	0.00	0.00
	8H	20.85	21.30	21.37	21.82	22.31	0.00	0.00	0.00	0.00	0.00
	12H	20.91	21.30	21.42	21.80	22.37	0.00	0.00	0.00	0.00	0.00
12H	4H	20.07	20.62	20.56	21.10	21.57	0.00	0.00	0.00	0.00	0.00
	6H	20.64	21.09	21.16	21.60	22.10	0.00	0.00	0.00	0.00	0.00
	8H	20.81	21.20	21.32	21.70	22.27	0.00	0.00	0.00	0.00	0.00