

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: P1055548

Luminaire Tested: S123R3DR-S1000D830-X4F0-XX-UDD-F-B

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1055548  
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-S1000D830-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, 80 CRI LEDS  
Ballast/Driver: -

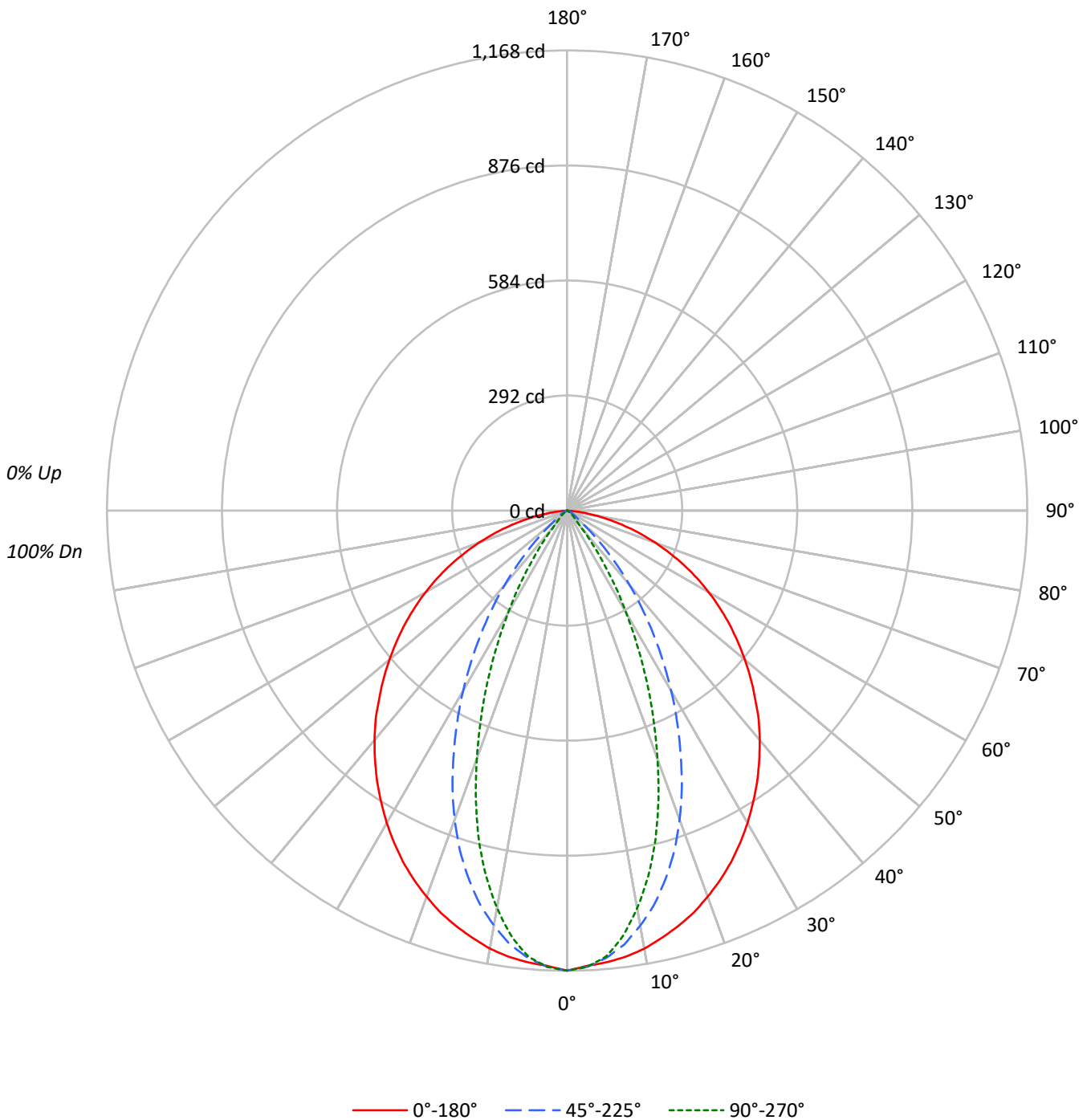
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1366.5 lumens  
Efficiency: N/A  
Efficacy: 39.4 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 (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	87	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°	14077	14077	14077
5°	13926	13794	13750
10°	13820	13093	12545
15°	13621	12065	10809
20°	13381	10707	8609
25°	13099	9071	6348
30°	12748	7352	4165
35°	12372	5597	2281
40°	11971	3870	782
45°	11504	2251	454
50°	11042	885	272
55°	10567	559	128
60°	10019	350	58
65°	9329	174	34
70°	8368	85	42
75°	7108	56	56
80°	5298	83	0
85°	2006	0	0

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 11504 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	107.1	7.8
10°-20°	271.7	19.9
20°-30°	324.1	23.7
30°-40°	274.9	20.1
40°-50°	186.8	13.7
50°-60°	115.8	8.5
60°-70°	58.6	4.3
70°-80°	23.9	1.7
80°-90°	3.7	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°	702.8	51.4
0°-40°	977.7	71.5
0°-60°	1280.3	93.7
0°-90°	1366.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1366.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1168	1168	1168	1168	1168	
5°	1151	1162	1140	1131	1136	109
15°	1091	1064	967	890	866	308
25°	985	893	682	527	477	453
35°	841	675	380	205	155	525
45°	675	442	132	33	27	521
55°	503	223	27	10	6	449
65°	327	54	6	1	1	323
75°	153	10	1	1	1	162
85°	14	0	0	1	0	26
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1167.6	1167.6	1167.6	1167.6	1167.6
2.5°	1156.7	1172.5	1159.1	1157.9	1159.1
5°	1150.7	1161.6	1139.8	1131.3	1136.1
7.5°	1142.2	1147.0	1110.7	1088.9	1088.9
10°	1128.9	1125.2	1069.5	1033.2	1024.7
12.5°	1110.7	1096.2	1023.5	966.6	950.8
15°	1091.3	1063.5	966.6	890.3	866.0
17.5°	1069.5	1027.1	904.8	805.5	770.3
20°	1042.9	985.9	834.5	713.4	671.0
22.5°	1015.0	941.1	760.6	618.9	571.7
25°	984.7	892.7	681.9	526.9	477.2
27.5°	950.8	841.8	604.4	438.5	384.0
30°	915.7	788.5	528.1	353.7	299.2
32.5°	878.1	732.8	451.8	276.2	225.3
35°	840.6	674.7	380.3	204.7	155.0
37.5°	800.6	616.5	311.3	141.7	98.1
40°	760.6	559.6	245.9	89.6	49.7
42.5°	719.5	500.2	186.5	44.8	33.9
45°	674.7	442.1	132.0	32.7	26.6
47.5°	632.3	386.4	87.2	26.6	20.6
50°	588.7	330.7	47.2	19.4	14.5
52.5°	545.1	277.4	33.9	14.5	9.7
55°	502.7	222.9	26.6	9.7	6.1
57.5°	459.1	175.6	20.6	6.1	3.6
60°	415.5	129.6	14.5	3.6	2.4
62.5°	371.8	89.6	9.7	2.4	1.2
65°	327.0	54.5	6.1	1.2	1.2
67.5°	281.0	37.5	3.6	1.2	1.2
70°	237.4	26.6	2.4	1.2	1.2
72.5°	193.8	17.0	1.2	1.2	0.0
75°	152.6	9.7	1.2	1.2	1.2
77.5°	112.6	3.6	1.2	1.2	0.0
80°	76.3	1.2	1.2	1.2	0.0
82.5°	42.4	0.0	1.2	1.2	0.0
85°	14.5	0.0	0.0	1.2	0.0
87.5°	0.0	0.0	0.0	1.2	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	18.24	19.52	18.60	19.83	20.14	0.00	0.00	0.00	0.00	0.00
	3H	20.18	21.31	20.56	21.65	22.01	0.00	0.00	0.00	0.00	0.00
	4H	21.01	22.06	21.41	22.41	22.80	0.00	0.00	0.00	0.00	0.00
	6H	21.56	22.53	21.98	22.90	23.30	0.00	0.00	0.00	0.00	0.00
	8H	21.69	22.60	22.12	23.00	23.40	0.00	0.00	0.00	0.00	0.00
	12H	21.71	22.59	22.14	22.97	23.40	0.00	0.00	0.00	0.00	0.00
4H	2H	18.00	19.05	18.40	19.41	19.79	0.00	0.00	0.00	0.00	0.00
	3H	19.95	20.81	20.36	21.22	21.62	0.00	0.00	0.00	0.00	0.00
	4H	20.77	21.54	21.20	21.96	22.40	0.00	0.00	0.00	0.00	0.00
	6H	21.37	22.03	21.83	22.48	22.94	0.00	0.00	0.00	0.00	0.00
	8H	21.52	22.14	21.99	22.58	23.06	0.00	0.00	0.00	0.00	0.00
	12H	21.57	22.11	22.05	22.59	23.07	0.00	0.00	0.00	0.00	0.00
8H	4H	20.62	21.24	21.09	21.69	22.16	0.00	0.00	0.00	0.00	0.00
	6H	21.21	21.71	21.71	22.20	22.69	0.00	0.00	0.00	0.00	0.00
	8H	21.35	21.80	21.88	22.32	22.81	0.00	0.00	0.00	0.00	0.00
	12H	21.41	21.81	21.93	22.30	22.88	0.00	0.00	0.00	0.00	0.00
12H	4H	20.57	21.12	21.06	21.60	22.08	0.00	0.00	0.00	0.00	0.00
	6H	21.14	21.59	21.67	22.11	22.60	0.00	0.00	0.00	0.00	0.00
	8H	21.31	21.70	21.83	22.20	22.77	0.00	0.00	0.00	0.00	0.00