

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: P1055627

Luminaire Tested: S123R3DR-S340D950-X4F0-XX-UDD-F-S

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1055627  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-6)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/25/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123R3DR-S340D950-X4F0-XX-UDD-F-S  
Description: DEFINE 3, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
CORE LIGHT ENGINE  
Light Source: 5000K CCT, 90 CRI LEDS  
Ballast/Driver: -

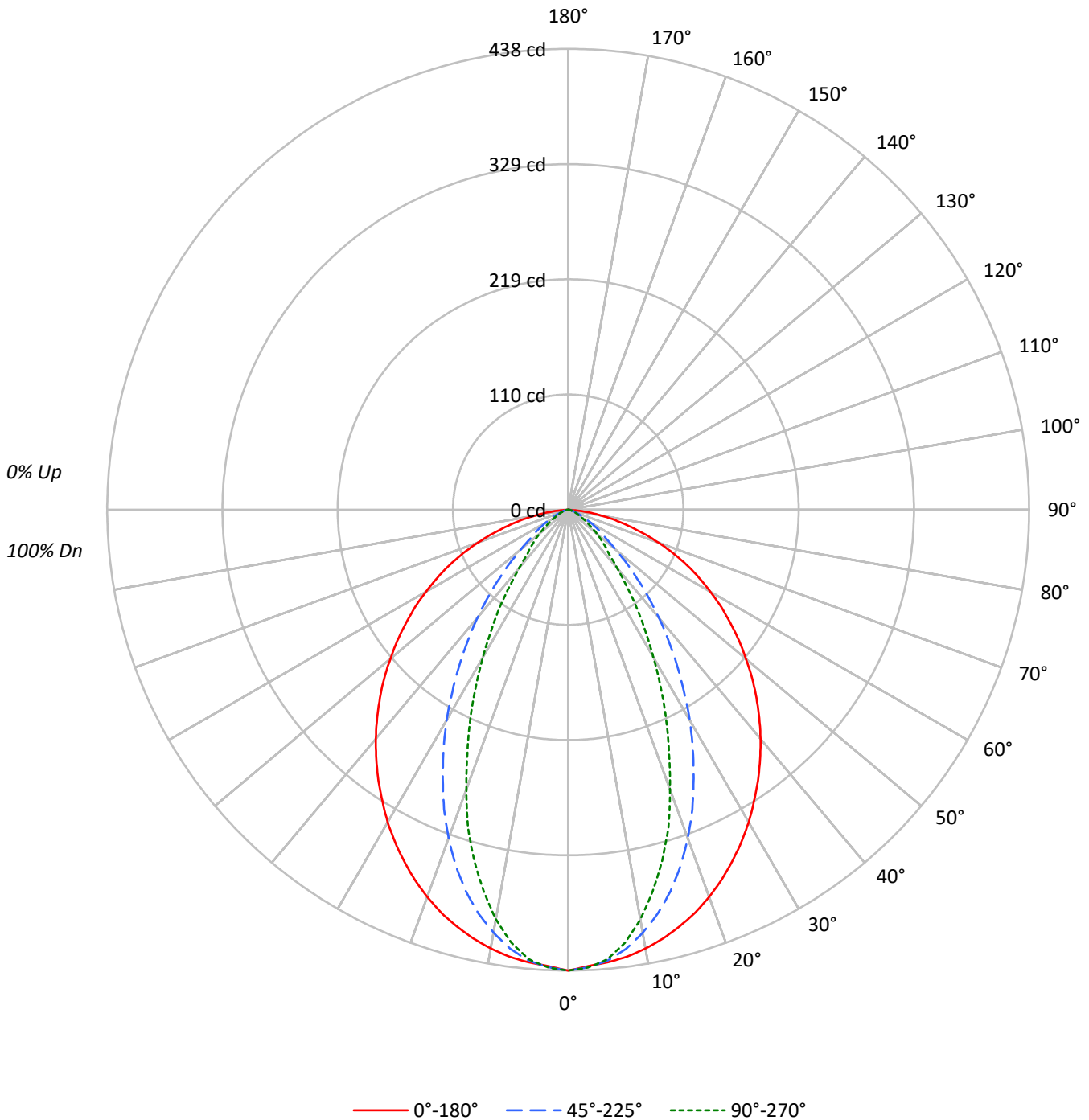
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 609.2 lumens  
Efficiency: N/A  
Efficacy: 48.4 lumens/watt  
Spacing Criteria (0/90/45): 1.17 / 0.77 / 0.94  
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	111	108	104	102	109	106	103	100	101	99	97	98	96	94	94	93	91	89
2	104	97	92	87	101	95	90	86	92	88	84	89	85	82	86	83	81	79
3	96	88	81	76	94	86	80	76	84	78	74	81	77	73	79	75	72	70
4	90	80	73	67	88	79	72	67	76	71	66	74	69	65	72	68	64	62
5	84	73	66	60	82	72	65	60	70	64	59	68	63	59	67	62	58	56
6	78	67	60	54	77	66	59	54	65	58	53	63	57	53	62	57	53	51
7	73	62	54	49	72	61	54	49	60	53	49	58	53	48	57	52	48	46
8	69	57	50	45	68	57	50	45	56	49	45	54	49	44	53	48	44	42
9	65	53	46	41	64	53	46	41	52	45	41	51	45	41	50	45	41	39
10	62	50	43	38	60	49	43	38	48	42	38	48	42	38	47	42	38	36

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

	0°	45°	90°
0°	5282	5282	5282
5°	5226	5206	5191
10°	5185	4997	4839
15°	5115	4686	4307
20°	5024	4262	3628
25°	4905	3750	2928
30°	4775	3214	2254
35°	4626	2652	1669
40°	4476	2111	1138
45°	4312	1579	856
50°	4136	1097	670
55°	3954	803	490
60°	3764	600	350
65°	3543	402	274
70°	3204	293	219
75°	2767	214	172
80°	2222	174	146
85°	1148	166	111

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 4312 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	40.5	6.6
10°-20°	105.4	17.3
20°-30°	132.4	21.7
30°-40°	123.3	20.2
40°-50°	94.4	15.5
50°-60°	62.8	10.3
60°-70°	33.8	5.6
70°-80°	13.9	2.3
80°-90°	2.6	0.4
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°	278.3	45.7
0°-40°	401.7	65.9
0°-60°	558.9	91.7
0°-90°	609.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	609.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	438	438	438	438	438	
5°	432	436	430	428	429	41
15°	410	403	375	353	345	115
25°	369	344	282	235	220	170
35°	314	268	180	128	113	197
45°	253	187	93	54	50	195
55°	188	109	38	27	23	169
65°	124	42	14	10	10	123
75°	59	10	5	4	4	64
85°	8	1	1	1	1	12
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	438.1	438.1	438.1	438.1	438.1
2.5°	434.3	439.7	435.2	435.6	435.6
5°	431.8	436.4	430.2	428.5	428.9
7.5°	428.5	431.4	421.0	415.7	414.8
10°	423.5	424.4	408.2	398.6	395.3
12.5°	417.3	414.4	393.2	377.4	371.2
15°	409.8	403.2	375.4	353.4	345.1
17.5°	401.5	390.3	355.0	326.4	316.4
20°	391.6	375.8	332.2	296.5	282.8
22.5°	380.8	360.4	308.1	265.8	250.4
25°	368.7	343.8	281.9	235.0	220.1
27.5°	356.3	326.0	256.2	206.0	190.6
30°	343.0	307.7	230.9	177.7	161.9
32.5°	328.5	287.8	204.7	151.6	135.8
35°	314.3	267.8	180.2	127.5	113.4
37.5°	299.4	247.9	156.5	106.3	90.5
40°	284.4	227.5	134.1	85.5	72.3
42.5°	268.7	207.2	112.9	68.1	57.7
45°	252.9	186.9	92.6	54.4	50.2
47.5°	237.1	166.5	74.7	46.9	42.8
50°	220.5	147.0	58.5	39.9	35.7
52.5°	204.7	127.5	45.7	32.8	29.1
55°	188.1	108.8	38.2	26.6	23.3
57.5°	172.7	89.7	31.6	20.8	18.3
60°	156.1	72.7	24.9	16.2	14.5
62.5°	140.3	56.9	19.1	12.9	11.6
65°	124.2	41.9	14.1	10.4	9.6
67.5°	108.0	30.3	10.8	8.3	7.9
70°	90.9	22.8	8.3	6.6	6.2
72.5°	74.7	16.2	6.2	5.4	5.0
75°	59.4	10.0	4.6	4.2	3.7
77.5°	45.7	5.8	3.3	3.3	2.9
80°	32.0	3.3	2.5	2.5	2.1
82.5°	19.5	2.1	1.7	1.7	1.7
85°	8.3	1.2	1.2	1.2	0.8
87.5°	1.2	0.4	0.4	0.4	0.4
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	15.59	16.95	15.96	17.26	17.58	4.18	5.54	4.55	5.85	6.16
	3H	17.35	18.55	17.73	18.88	19.25	4.84	6.04	5.22	6.37	6.74
	4H	18.05	19.17	18.45	19.52	19.91	5.03	6.16	5.44	6.51	6.89
	6H	18.56	19.60	18.98	19.96	20.36	5.16	6.19	5.57	6.56	6.95
	8H	18.70	19.68	19.13	20.07	20.48	5.19	6.17	5.62	6.56	6.97
	12H	18.75	19.69	19.18	20.07	20.50	5.20	6.14	5.63	6.52	6.95
4H	2H	15.40	16.53	15.81	16.88	17.26	4.73	5.86	5.13	6.21	6.59
	3H	17.20	18.12	17.61	18.52	18.92	5.53	6.45	5.94	6.85	7.25
	4H	17.89	18.71	18.32	19.13	19.57	5.79	6.61	6.22	7.03	7.47
	6H	18.46	19.17	18.92	19.62	20.08	5.98	6.69	6.45	7.14	7.61
	8H	18.64	19.30	19.10	19.75	20.22	6.04	6.70	6.51	7.15	7.62
	12H	18.72	19.31	19.21	19.79	20.26	6.07	6.66	6.56	7.14	7.61
8H	4H	17.77	18.43	18.24	18.88	19.35	6.10	6.76	6.57	7.21	7.68
	6H	18.32	18.86	18.82	19.36	19.84	6.35	6.89	6.85	7.38	7.87
	8H	18.50	18.98	19.02	19.50	19.99	6.44	6.93	6.96	7.44	7.93
	12H	18.60	19.03	19.12	19.52	20.10	6.52	6.95	7.03	7.44	8.01
12H	4H	17.72	18.31	18.21	18.79	19.27	6.14	6.73	6.63	7.21	7.69
	6H	18.26	18.75	18.78	19.26	19.76	6.39	6.88	6.91	7.39	7.89
	8H	18.46	18.89	18.97	19.38	19.95	6.53	6.95	7.04	7.45	8.02