

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: P1056215

Luminaire Tested: S124R3DR-H795D935-X4F0-XX-UDD-F-S

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1056215  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-9)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/25/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S124R3DR-H795D935-X4F0-XX-UDD-F-S  
Description: DEFINE 4, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 3500K CCT, 90 CRI LEDS  
Ballast/Driver: -

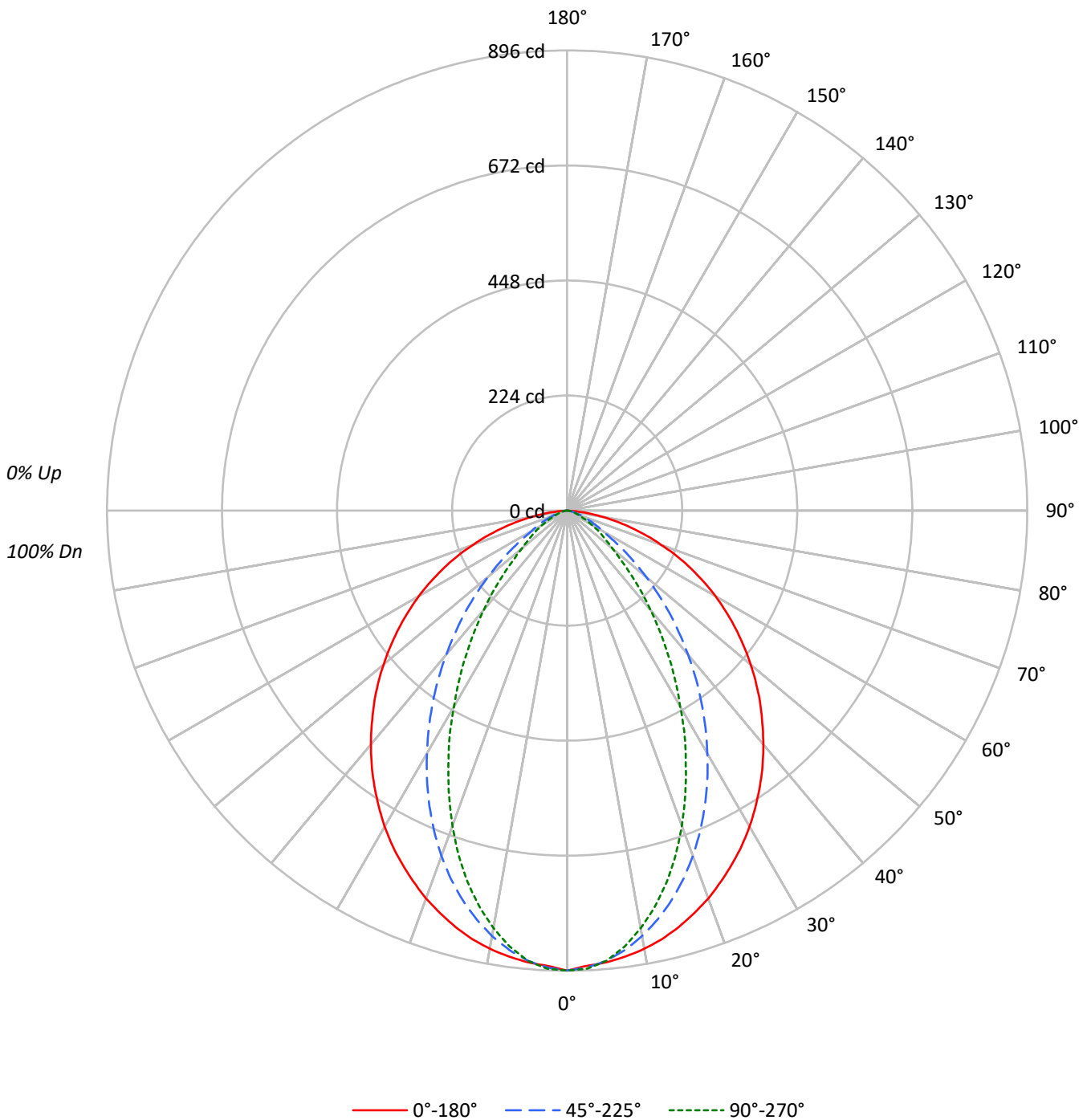
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1447.9 lumens  
Efficiency: N/A  
Efficacy: 60.8 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 0.87 / 1.03  
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 23.8  
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	107	104	101	108	105	102	99	101	98	96	97	95	93	94	92	90	89
2	103	96	91	86	101	94	89	85	91	87	83	88	84	81	85	82	79	78
3	95	87	80	74	93	85	79	74	82	77	73	80	75	71	77	73	70	68
4	89	78	71	65	86	77	70	65	75	69	64	73	67	63	71	66	62	60
5	82	71	64	58	80	70	63	58	68	62	57	66	61	56	65	60	56	54
6	77	65	57	52	75	64	57	52	63	56	51	61	55	51	60	54	50	48
7	72	60	52	47	70	59	52	47	58	51	46	56	50	46	55	50	46	44
8	67	55	48	42	66	55	47	42	53	47	42	52	46	42	51	46	42	40
9	63	51	44	39	62	51	44	39	50	43	39	49	43	38	48	42	38	37
10	60	48	41	36	59	47	40	36	46	40	36	45	40	35	45	39	35	34

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

	0°	45°	90°
0°	7917	7917	7917
5°	7837	7807	7807
10°	7777	7553	7410
15°	7685	7189	6853
20°	7562	6731	6142
25°	7410	6190	5335
30°	7253	5575	4494
35°	7064	4923	3699
40°	6861	4224	2915
45°	6651	3514	2179
50°	6422	2763	1594
55°	6169	2044	1272
60°	5897	1415	973
65°	5546	1098	715
70°	5023	776	561
75°	4386	540	427
80°	3523	423	382
85°	1948	335	335

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 6651 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	83.1	5.7
10°-20°	221.9	15.3
20°-30°	296.0	20.4
30°-40°	298.0	20.6
40°-50°	244.4	16.9
50°-60°	167.1	11.5
60°-70°	93.4	6.4
70°-80°	37.0	2.6
80°-90°	7.0	0.5
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°	601.0	41.5
0°-40°	899.0	62.1
0°-60°	1310.5	90.5
0°-90°	1447.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1447.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	896	896	896	896	896	
5°	883	893	880	876	880	84
15°	840	830	785	758	749	237
25°	760	722	634	570	547	350
35°	654	585	456	369	343	409
45°	532	434	281	198	174	410
55°	400	281	133	88	82	358
65°	265	133	52	38	34	262
75°	128	35	16	13	12	138
85°	19	3	3	3	3	27
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	895.5	895.5	895.5	895.5	895.5
2.5°	887.1	898.0	890.5	891.3	893.0
5°	883.0	893.0	879.6	875.5	879.6
7.5°	875.5	883.0	862.9	854.6	856.3
10°	866.3	868.8	841.3	827.1	825.4
12.5°	854.6	851.3	815.4	794.6	789.6
15°	839.6	830.4	785.4	757.9	748.7
17.5°	822.1	806.3	752.1	716.2	702.9
20°	803.7	780.4	715.4	669.5	652.8
22.5°	782.1	752.9	676.2	620.3	601.1
25°	759.6	722.0	634.5	570.3	546.9
27.5°	736.2	690.4	591.1	519.4	496.1
30°	710.4	656.2	546.1	468.6	440.2
32.5°	682.9	621.2	501.1	418.5	391.9
35°	654.5	585.3	456.1	369.4	342.7
37.5°	625.3	548.6	411.0	322.7	296.0
40°	594.5	511.1	366.0	278.5	252.6
42.5°	562.8	472.7	322.7	236.8	212.6
45°	531.9	434.4	281.0	197.6	174.3
47.5°	499.4	396.0	240.1	160.9	140.9
50°	466.9	357.7	200.9	129.2	115.9
52.5°	433.6	319.3	165.1	105.9	96.7
55°	400.2	281.0	132.6	88.4	82.5
57.5°	366.9	242.6	102.6	75.0	68.4
60°	333.5	205.1	80.0	60.9	55.0
62.5°	299.3	167.6	65.9	48.4	43.4
65°	265.1	133.4	52.5	37.5	34.2
67.5°	231.0	101.7	40.0	29.2	26.7
70°	194.3	72.5	30.0	22.5	21.7
72.5°	162.6	49.2	21.7	17.5	16.7
75°	128.4	35.0	15.8	13.3	12.5
77.5°	99.2	22.5	11.7	10.8	10.0
80°	69.2	12.5	8.3	7.5	7.5
82.5°	42.5	6.7	5.8	5.0	5.0
85°	19.2	3.3	3.3	3.3	3.3
87.5°	3.3	1.7	1.7	1.7	1.7
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	17.91	19.32	18.28	19.63	19.95	9.00	10.41	9.37	10.72	11.04
	3H	19.50	20.75	19.88	21.08	21.44	9.59	10.84	9.97	11.17	11.54
	4H	20.09	21.26	20.49	21.61	21.99	9.75	10.92	10.15	11.27	11.65
	6H	20.53	21.60	20.94	21.97	22.36	9.86	10.93	10.27	11.30	11.69
	8H	20.64	21.66	21.07	22.05	22.45	9.88	10.90	10.31	11.29	11.69
	12H	20.68	21.66	21.11	22.04	22.47	9.88	10.86	10.32	11.24	11.67
4H	2H	17.77	18.94	18.17	19.28	19.67	9.58	10.75	9.98	11.10	11.48
	3H	19.41	20.37	19.83	20.78	21.18	10.30	11.26	10.71	11.66	12.06
	4H	20.02	20.88	20.45	21.30	21.74	10.50	11.36	10.93	11.78	12.22
	6H	20.51	21.25	20.97	21.70	22.16	10.67	11.41	11.13	11.85	12.32
	8H	20.65	21.35	21.12	21.79	22.26	10.70	11.39	11.17	11.84	12.31
	12H	20.73	21.34	21.21	21.82	22.30	10.72	11.34	11.21	11.82	12.29
8H	4H	19.91	20.60	20.38	21.05	21.52	10.77	11.46	11.24	11.91	12.38
	6H	20.39	20.96	20.89	21.46	21.94	10.97	11.54	11.47	12.04	12.52
	8H	20.54	21.05	21.06	21.56	22.05	11.03	11.54	11.55	12.05	12.54
	12H	20.63	21.08	21.14	21.57	22.14	11.09	11.54	11.60	12.03	12.60
12H	4H	19.87	20.49	20.36	20.97	21.44	10.80	11.41	11.28	11.89	12.37
	6H	20.34	20.85	20.86	21.36	21.85	11.00	11.51	11.52	12.02	12.52
	8H	20.50	20.95	21.02	21.45	22.01	11.10	11.54	11.61	12.04	12.61