

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: P1056188

Luminaire Tested: S124R3DR-H575D935-X4F0-XX-UDD-F-S

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1056188  
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-H575D935-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: -

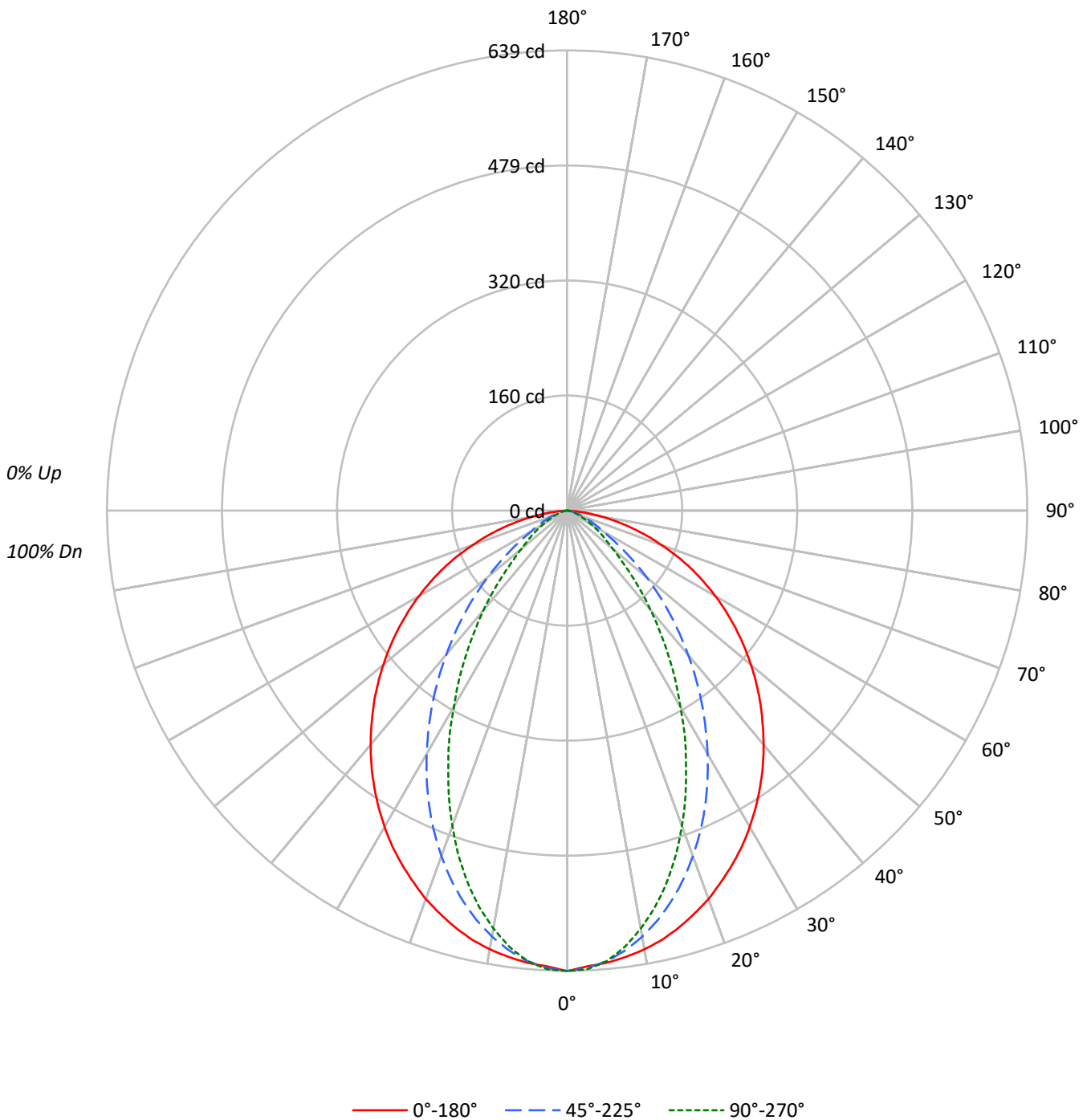
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1033.9 lumens  
Efficiency: N/A  
Efficacy: 59.8 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): 17.3  
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	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°	5653	5653	5653
5°	5596	5574	5574
10°	5554	5393	5291
15°	5487	5133	4893
20°	5400	4806	4385
25°	5291	4420	3809
30°	5178	3981	3209
35°	5044	3514	2641
40°	4899	3017	2082
45°	4749	2508	1555
50°	4586	1974	1139
55°	4405	1460	908
60°	4210	1011	695
65°	3960	785	510
70°	3585	553	401
75°	3133	386	304
80°	2515	305	275
85°	1390	243	243

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 4749 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	59.3	5.7
10°-20°	158.5	15.3
20°-30°	211.4	20.4
30°-40°	212.8	20.6
40°-50°	174.5	16.9
50°-60°	119.3	11.5
60°-70°	66.7	6.4
70°-80°	26.4	2.6
80°-90°	5.0	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°	429.1	41.5
0°-40°	641.9	62.1
0°-60°	935.8	90.5
0°-90°	1033.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1033.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	639	639	639	639	639	
5°	630	638	628	625	628	60
15°	600	593	561	541	535	169
25°	542	516	453	407	390	250
35°	467	418	326	264	245	292
45°	380	310	201	141	124	293
55°	286	201	95	63	59	256
65°	189	95	38	27	24	187
75°	92	25	11	10	9	98
85°	14	2	2	2	2	19
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	639.4	639.4	639.4	639.4	639.4
2.5°	633.4	641.2	635.8	636.4	637.6
5°	630.5	637.6	628.1	625.1	628.1
7.5°	625.1	630.5	616.2	610.2	611.4
10°	618.6	620.3	600.7	590.6	589.4
12.5°	610.2	607.8	582.2	567.4	563.8
15°	599.5	593.0	560.8	541.2	534.6
17.5°	587.0	575.7	537.0	511.4	501.9
20°	573.9	557.2	510.8	478.1	466.1
22.5°	558.4	537.6	482.8	442.9	429.2
25°	542.4	515.6	453.1	407.2	390.5
27.5°	525.7	492.9	422.1	370.9	354.2
30°	507.2	468.5	389.9	334.6	314.3
32.5°	487.6	443.5	357.8	298.9	279.8
35°	467.3	417.9	325.6	263.7	244.7
37.5°	446.5	391.7	293.5	230.4	211.3
40°	424.5	364.9	261.4	198.8	180.4
42.5°	401.9	337.6	230.4	169.1	151.8
45°	379.8	310.2	200.6	141.1	124.4
47.5°	356.6	282.8	171.5	114.9	100.6
50°	333.4	255.4	143.5	92.3	82.8
52.5°	309.6	228.0	117.9	75.6	69.1
55°	285.8	200.6	94.7	63.1	58.9
57.5°	261.9	173.2	73.2	53.6	48.8
60°	238.1	146.5	57.2	43.5	39.3
62.5°	213.7	119.7	47.0	34.5	31.0
65°	189.3	95.3	37.5	26.8	24.4
67.5°	164.9	72.6	28.6	20.8	19.1
70°	138.7	51.8	21.4	16.1	15.5
72.5°	116.1	35.1	15.5	12.5	11.9
75°	91.7	25.0	11.3	9.5	8.9
77.5°	70.8	16.1	8.3	7.7	7.1
80°	49.4	8.9	6.0	5.4	5.4
82.5°	30.4	4.8	4.2	3.6	3.6
85°	13.7	2.4	2.4	2.4	2.4
87.5°	2.4	1.2	1.2	1.2	1.2
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	16.74	18.15	17.11	18.46	18.78	7.83	9.24	8.20	9.55	9.87
	3H	18.33	19.58	18.71	19.91	20.27	8.43	9.68	8.81	10.01	10.37
	4H	18.92	20.09	19.32	20.44	20.82	8.58	9.75	8.98	10.10	10.48
	6H	19.35	20.43	19.77	20.80	21.19	8.69	9.76	9.10	10.13	10.53
	8H	19.47	20.49	19.90	20.88	21.28	8.71	9.73	9.14	10.12	10.52
	12H	19.51	20.49	19.94	20.87	21.30	8.72	9.69	9.15	10.08	10.51
4H	2H	16.59	17.76	17.00	18.11	18.49	8.42	9.59	8.82	9.94	10.32
	3H	18.24	19.20	18.65	19.60	20.01	9.13	10.09	9.54	10.49	10.89
	4H	18.85	19.71	19.28	20.12	20.57	9.33	10.19	9.77	10.61	11.05
	6H	19.34	20.08	19.80	20.53	20.99	9.50	10.24	9.96	10.69	11.15
	8H	19.48	20.18	19.95	20.62	21.09	9.53	10.22	10.00	10.67	11.14
	12H	19.56	20.17	20.04	20.65	21.13	9.56	10.17	10.04	10.65	11.13
8H	4H	18.74	19.43	19.21	19.88	20.35	9.60	10.29	10.07	10.74	11.21
	6H	19.22	19.79	19.72	20.28	20.76	9.81	10.37	10.31	10.87	11.35
	8H	19.37	19.88	19.89	20.39	20.88	9.87	10.37	10.39	10.89	11.38
	12H	19.46	19.91	19.97	20.40	20.97	9.93	10.38	10.44	10.87	11.44
12H	4H	18.70	19.32	19.19	19.80	20.27	9.63	10.24	10.12	10.73	11.20
	6H	19.17	19.68	19.69	20.19	20.68	9.84	10.35	10.36	10.86	11.35
	8H	19.33	19.78	19.85	20.28	20.84	9.93	10.38	10.44	10.87	11.44