

Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269



Scaled data based on original data using  
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P1056170

Luminaire Tested: S124R3DR-H575D830-X4F0-XX-UDD-FLL-S

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1056170  
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-H575D830-X4F0-XX-UDD-FLL-S  
Description: DEFINE 4, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 3000K CCT, 80 CRI LEDS  
Ballast/Driver: -

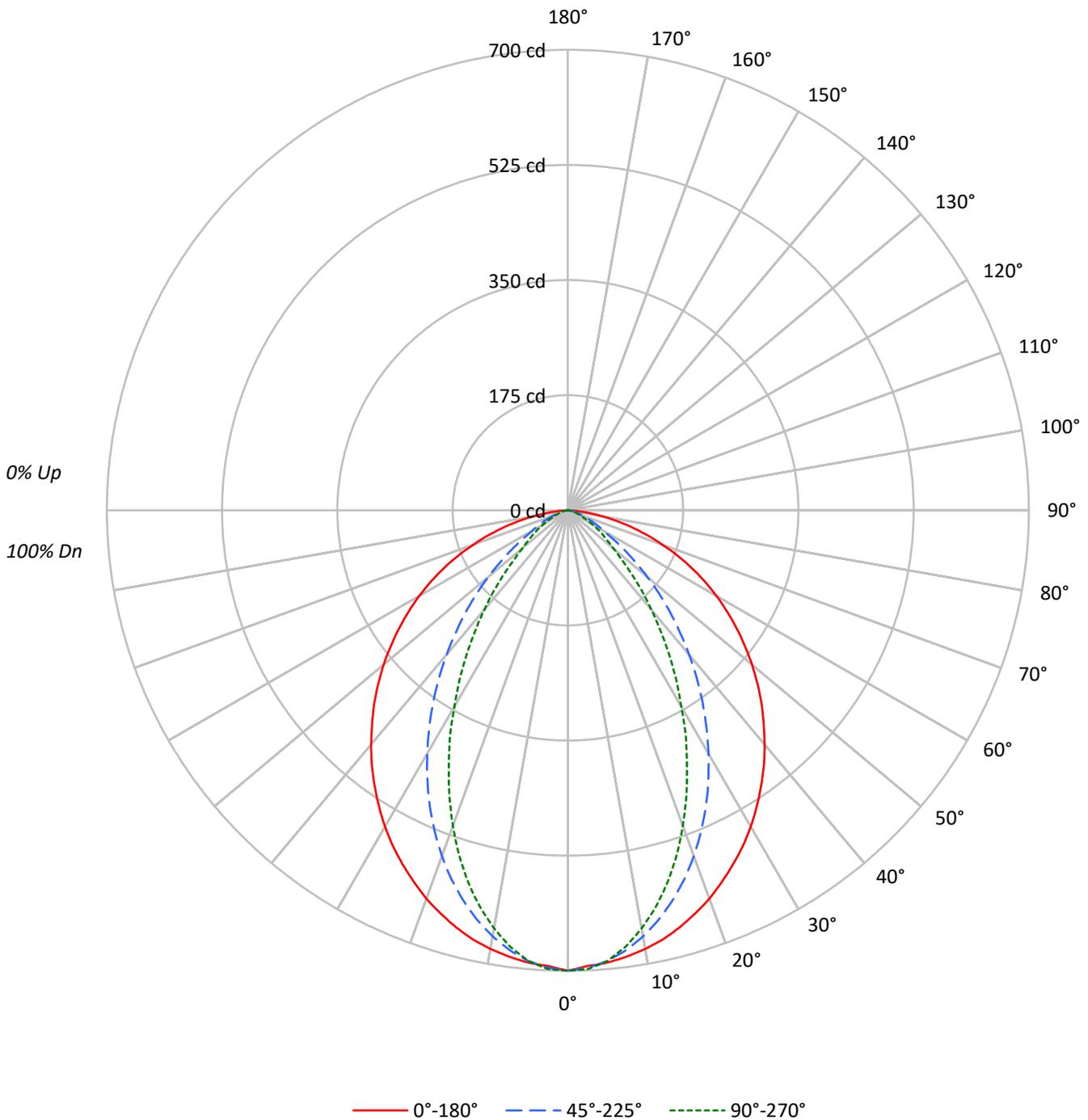
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1131.8 lumens  
Efficiency: N/A  
Efficacy: 65.4 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 (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°	6188	6188	6188
5°	6126	6103	6103
10°	6079	5904	5792
15°	6007	5619	5356
20°	5912	5261	4801
25°	5792	4839	4170
30°	5669	4358	3513
35°	5522	3848	2892
40°	5363	3302	2279
45°	5199	2746	1703
50°	5020	2161	1246
55°	4822	1597	994
60°	4610	1107	760
65°	4335	860	559
70°	3927	607	437
75°	3430	424	335
80°	2755	331	300
85°	1522	264	264

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 5199 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	64.9	5.7
10°-20°	173.5	15.3
20°-30°	231.4	20.4
30°-40°	233.0	20.6
40°-50°	191.0	16.9
50°-60°	130.6	11.5
60°-70°	73.0	6.4
70°-80°	28.9	2.6
80°-90°	5.5	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°	469.8	41.5
0°-40°	702.7	62.1
0°-60°	1024.4	90.5
0°-90°	1131.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1131.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	700	700	700	700	700	
5°	690	698	688	684	688	65
15°	656	649	614	592	585	185
25°	594	564	496	446	428	274
35°	512	458	356	289	268	320
45°	416	340	220	154	136	321
55°	313	220	104	69	64	280
65°	207	104	41	29	27	205
75°	100	27	12	10	10	108
85°	15	3	3	3	3	21
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	699.9	699.9	699.9	699.9	699.9
2.5°	693.4	701.9	696.0	696.7	698.0
5°	690.2	698.0	687.6	684.3	687.6
7.5°	684.3	690.2	674.5	668.0	669.3
10°	677.1	679.1	657.6	646.5	645.2
12.5°	668.0	665.4	637.4	621.1	617.2
15°	656.3	649.1	613.9	592.4	585.2
17.5°	642.6	630.2	587.9	559.8	549.4
20°	628.3	610.0	559.2	523.3	510.3
22.5°	611.3	588.5	528.5	484.9	469.9
25°	593.7	564.4	496.0	445.8	427.5
27.5°	575.5	539.6	462.1	406.0	387.8
30°	555.3	512.9	426.9	366.3	344.1
32.5°	533.8	485.5	391.7	327.2	306.3
35°	511.6	457.5	356.5	288.7	267.9
37.5°	488.8	428.8	321.3	252.2	231.4
40°	464.7	399.5	286.1	217.7	197.5
42.5°	439.9	369.5	252.2	185.1	166.2
45°	415.8	339.5	219.6	154.5	136.2
47.5°	390.4	309.6	187.7	125.8	110.1
50°	365.0	279.6	157.1	101.0	90.6
52.5°	338.9	249.6	129.0	82.8	75.6
55°	312.8	219.6	103.6	69.1	64.5
57.5°	286.8	189.7	80.2	58.7	53.4
60°	260.7	160.3	62.6	47.6	43.0
62.5°	234.0	131.0	51.5	37.8	33.9
65°	207.2	104.3	41.1	29.3	26.7
67.5°	180.5	79.5	31.3	22.8	20.9
70°	151.9	56.7	23.5	17.6	16.9
72.5°	127.1	38.5	16.9	13.7	13.0
75°	100.4	27.4	12.4	10.4	9.8
77.5°	77.6	17.6	9.1	8.5	7.8
80°	54.1	9.8	6.5	5.9	5.9
82.5°	33.2	5.2	4.6	3.9	3.9
85°	15.0	2.6	2.6	2.6	2.6
87.5°	2.6	1.3	1.3	1.3	1.3
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	17.06	18.46	17.42	18.78	19.09	8.15	9.56	8.52	9.87	10.18
	3H	18.64	19.90	19.02	20.22	20.59	8.74	9.99	9.12	10.32	10.69
	4H	19.24	20.41	19.64	20.76	21.14	8.90	10.07	9.30	10.42	10.80
	6H	19.67	20.75	20.08	21.11	21.51	9.01	10.08	9.42	10.45	10.84
	8H	19.78	20.80	20.21	21.19	21.60	9.03	10.05	9.45	10.44	10.84
	12H	19.83	20.80	20.26	21.18	21.61	9.03	10.01	9.46	10.39	10.82
4H	2H	16.91	18.08	17.31	18.43	18.81	8.73	9.90	9.14	10.25	10.63
	3H	18.56	19.52	18.97	19.92	20.32	9.45	10.40	9.86	10.81	11.21
	4H	19.17	20.02	19.60	20.44	20.88	9.65	10.51	10.08	10.92	11.37
	6H	19.66	20.40	20.12	20.84	21.31	9.82	10.56	10.28	11.00	11.47
	8H	19.80	20.49	20.27	20.94	21.41	9.85	10.54	10.32	10.99	11.46
	12H	19.87	20.49	20.36	20.97	21.44	9.87	10.49	10.36	10.97	11.44
8H	4H	19.06	19.75	19.53	20.20	20.67	9.92	10.61	10.39	11.06	11.53
	6H	19.54	20.11	20.04	20.60	21.08	10.13	10.69	10.63	11.19	11.67
	8H	19.68	20.19	20.20	20.71	21.20	10.18	10.69	10.70	11.20	11.69
	12H	19.77	20.22	20.29	20.72	21.29	10.24	10.69	10.75	11.18	11.75
12H	4H	19.02	19.63	19.50	20.11	20.59	9.95	10.56	10.43	11.04	11.52
	6H	19.49	19.99	20.00	20.51	21.00	10.15	10.66	10.67	11.18	11.67
	8H	19.65	20.10	20.16	20.59	21.16	10.25	10.70	10.76	11.19	11.76