

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: P1056181

Luminaire Tested: S124R3DR-H575D927-X4F0-XX-UDD-FLL-B

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1056181  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-8)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/25/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S124R3DR-H575D927-X4F0-XX-UDD-FLL-B  
Description: DEFINE 4, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 2700K CCT, 90 CRI LEDS  
Ballast/Driver: -

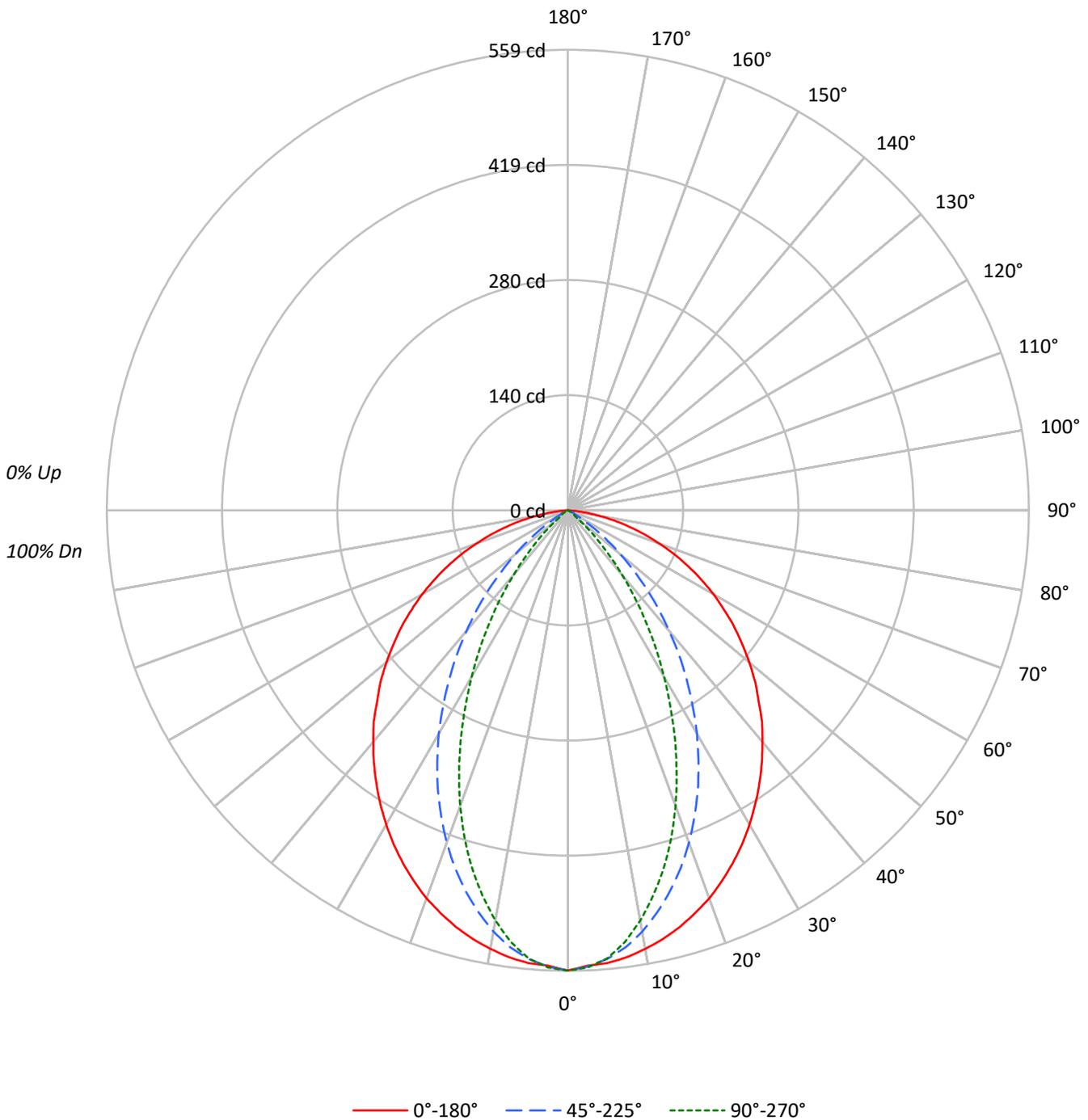
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 780.9 lumens  
Efficiency: N/A  
Efficacy: 45.1 lumens/watt  
Spacing Criteria (0/90/45): 1.18 / 0.81 / 0.97  
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	112	108	105	102	109	106	103	100	102	99	97	98	96	94	95	93	92	90
2	104	98	93	88	102	96	91	87	93	89	85	90	86	83	87	84	82	80
3	97	89	82	77	95	87	81	77	84	79	75	82	78	74	79	76	73	71
4	90	81	74	68	88	80	73	68	77	72	67	75	70	66	73	69	65	64
5	84	74	66	61	83	73	66	61	71	65	60	69	64	60	67	63	59	57
6	79	68	60	55	77	67	60	55	65	59	54	64	58	54	62	57	54	52
7	74	63	55	50	73	62	55	50	60	54	50	59	53	49	58	53	49	47
8	70	58	51	46	68	57	50	46	56	50	45	55	49	45	54	49	45	43
9	66	54	47	42	64	53	47	42	52	46	42	51	46	42	50	45	41	40
10	62	50	43	39	61	50	43	39	49	43	39	48	42	39	47	42	38	37

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

	0°	45°	90°
0°	4940	4940	4940
5°	4896	4852	4847
10°	4853	4662	4539
15°	4794	4382	4112
20°	4716	4040	3592
25°	4611	3639	2998
30°	4496	3193	2382
35°	4369	2708	1773
40°	4236	2207	1182
45°	4089	1684	650
50°	3948	1153	180
55°	3790	624	119
60°	3604	195	67
65°	3368	126	33
70°	3045	57	13
75°	2620	17	0
80°	1981	0	0
85°	832	0	0

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 4089 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	51.5	6.6
10°-20°	135.3	17.3
20°-30°	174.9	22.4
30°-40°	167.1	21.4
40°-50°	125.0	16.0
50°-60°	74.4	9.5
60°-70°	37.8	4.8
70°-80°	13.1	1.7
80°-90°	1.8	0.2
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°	361.7	46.3
0°-40°	528.8	67.7
0°-60°	728.2	93.3
0°-90°	780.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	780.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	559	559	559	559	559	
5°	552	556	547	544	546	52
15°	524	513	479	456	449	148
25°	473	440	373	324	307	218
35°	405	349	251	187	164	253
45°	327	251	135	72	52	253
55°	246	153	40	9	8	220
65°	161	62	6	2	2	159
75°	77	8	0	0	0	81
85°	8	0	0	0	0	14
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	558.7	558.7	558.7	558.7	558.7
2.5°	553.2	559.8	554.3	554.9	555.4
5°	551.6	556.0	546.7	543.9	546.1
7.5°	547.2	548.8	535.2	528.0	528.6
10°	540.6	539.0	519.3	507.2	505.6
12.5°	533.0	527.5	500.1	482.6	478.7
15°	523.7	512.7	478.7	456.3	449.2
17.5°	512.7	496.8	455.2	425.6	416.8
20°	501.2	479.3	429.4	392.7	381.8
22.5°	487.5	459.6	401.5	358.2	344.5
25°	472.7	439.8	373.0	323.7	307.3
27.5°	457.4	418.5	342.9	288.7	269.5
30°	440.4	396.0	312.8	253.1	233.3
32.5°	422.9	373.0	281.5	220.2	198.3
35°	404.8	348.9	250.9	186.8	164.3
37.5°	386.2	324.8	221.3	155.0	132.0
40°	367.0	300.2	191.2	124.9	102.4
42.5°	348.4	275.5	162.7	96.4	75.6
45°	327.0	250.9	134.7	71.8	52.0
47.5°	307.8	226.8	107.9	48.8	30.7
50°	287.0	201.0	83.8	28.5	13.1
52.5°	266.2	176.9	61.3	12.6	9.9
55°	245.9	152.8	40.5	9.3	7.7
57.5°	224.6	128.7	21.9	7.1	5.5
60°	203.8	105.2	11.0	5.5	3.8
62.5°	182.4	82.7	8.8	3.3	2.2
65°	161.0	61.9	6.0	2.2	1.6
67.5°	139.7	42.2	3.8	1.1	0.5
70°	117.8	25.7	2.2	0.5	0.5
72.5°	97.0	13.1	1.1	0.5	0.5
75°	76.7	8.2	0.5	0.5	0.0
77.5°	57.0	4.4	0.5	0.5	0.0
80°	38.9	1.6	0.0	0.0	0.0
82.5°	22.5	0.5	0.0	0.0	0.0
85°	8.2	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	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	16.00	17.33	16.37	17.65	17.96	0.00	0.00	0.00	0.00	0.00
	3H	17.55	18.72	17.93	19.05	19.42	0.00	0.00	0.00	0.00	0.00
	4H	18.14	19.24	18.54	19.59	19.97	0.00	0.00	0.00	0.00	0.00
	6H	18.56	19.56	18.97	19.94	20.33	0.00	0.00	0.00	0.00	0.00
	8H	18.66	19.61	19.09	20.00	20.41	0.00	0.00	0.00	0.00	0.00
	12H	18.68	19.59	19.11	19.97	20.40	0.00	0.00	0.00	0.00	0.00
4H	2H	15.78	16.88	16.18	17.23	17.61	0.00	0.00	0.00	0.00	0.00
	3H	17.35	18.24	17.76	18.64	19.05	0.00	0.00	0.00	0.00	0.00
	4H	17.93	18.73	18.36	19.15	19.59	0.00	0.00	0.00	0.00	0.00
	6H	18.39	19.08	18.85	19.52	19.99	0.00	0.00	0.00	0.00	0.00
	8H	18.51	19.15	18.98	19.60	20.07	0.00	0.00	0.00	0.00	0.00
	12H	18.55	19.12	19.04	19.60	20.07	0.00	0.00	0.00	0.00	0.00
8H	4H	17.79	18.43	18.26	18.88	19.35	0.00	0.00	0.00	0.00	0.00
	6H	18.23	18.76	18.74	19.25	19.73	0.00	0.00	0.00	0.00	0.00
	8H	18.35	18.82	18.87	19.33	19.83	0.00	0.00	0.00	0.00	0.00
	12H	18.40	18.81	18.92	19.31	19.88	0.00	0.00	0.00	0.00	0.00
12H	4H	17.75	18.31	18.23	18.80	19.27	0.00	0.00	0.00	0.00	0.00
	6H	18.17	18.64	18.69	19.16	19.65	0.00	0.00	0.00	0.00	0.00
	8H	18.31	18.72	18.82	19.21	19.79	0.00	0.00	0.00	0.00	0.00