

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: P1056040

Luminaire Tested: S124R3DR-S575D840-X4F0-XX-UDD-F-B

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1056040  
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-S575D840-X4F0-XX-UDD-F-B  
Description: DEFINE 4, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
CORE LIGHT ENGINE  
Light Source: 4000K CCT, 80 CRI LEDS  
Ballast/Driver: -

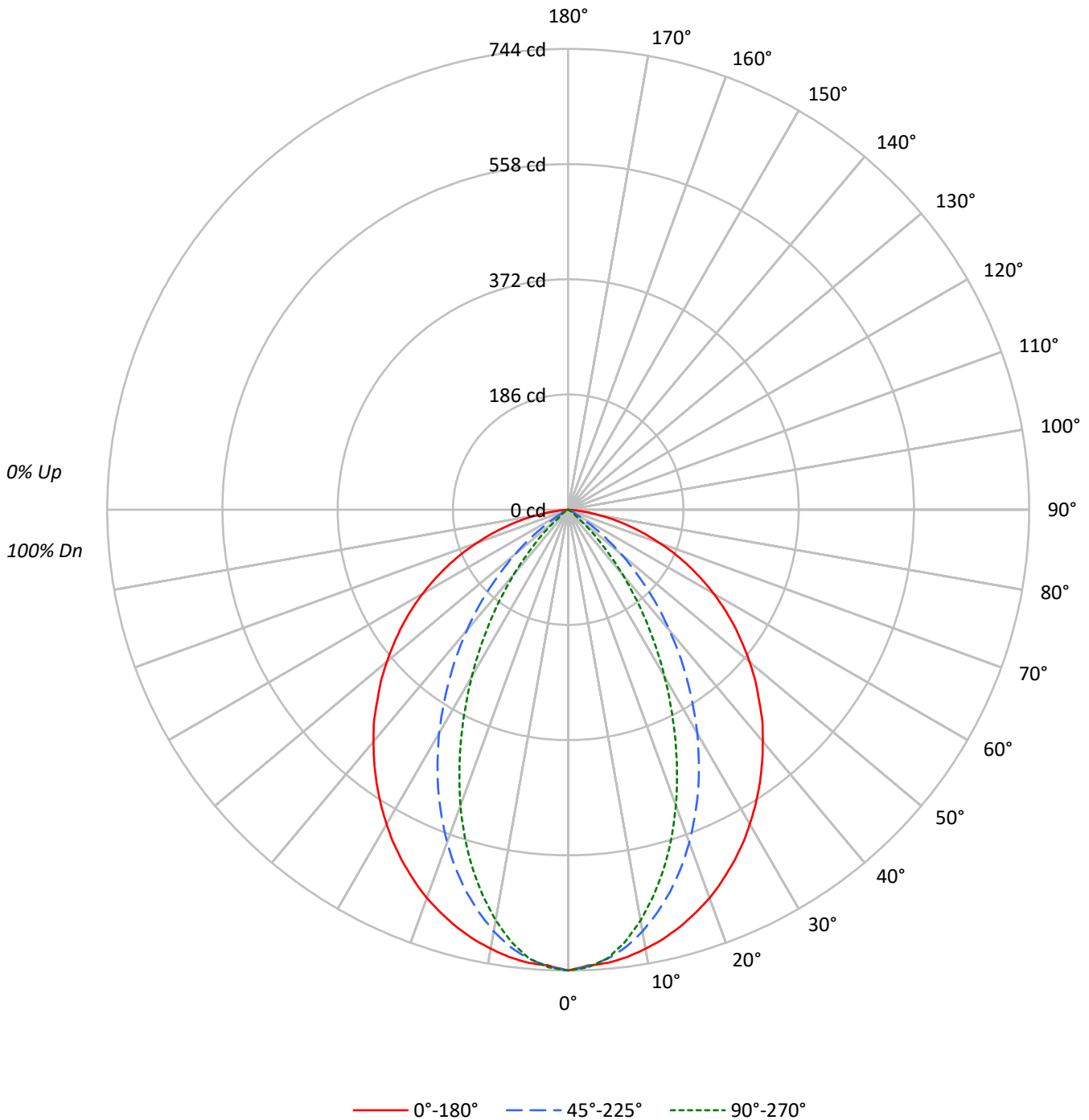
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1039.6 lumens  
Efficiency: N/A  
Efficacy: 54.4 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): 19.1  
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	50	30	10	0	
RCR																						
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100				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°	6577	6577	6577
5°	6518	6459	6453
10°	6462	6206	6043
15°	6382	5834	5474
20°	6278	5379	4782
25°	6140	4845	3991
30°	5986	4251	3172
35°	5817	3605	2362
40°	5639	2937	1574
45°	5444	2243	866
50°	5256	1535	241
55°	5047	832	157
60°	4797	258	90
65°	4485	167	46
70°	4053	75	18
75°	3488	24	0
80°	2637	0	0
85°	1106	0	0

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 5444 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	68.6	6.6
10°-20°	180.2	17.3
20°-30°	232.8	22.4
30°-40°	222.5	21.4
40°-50°	166.4	16.0
50°-60°	99.0	9.5
60°-70°	50.3	4.8
70°-80°	17.5	1.7
80°-90°	2.4	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°	481.6	46.3
0°-40°	704.1	67.7
0°-60°	969.5	93.3
0°-90°	1039.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1039.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	744	744	744	744	744	
5°	734	740	728	724	727	70
15°	697	683	637	608	598	196
25°	629	586	497	431	409	290
35°	539	464	334	249	219	337
45°	435	334	179	96	69	337
55°	327	204	54	12	10	292
65°	214	82	8	3	2	212
75°	102	11	1	1	0	108
85°	11	0	0	0	0	18
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	743.9	743.9	743.9	743.9	743.9
2.5°	736.6	745.3	738.0	738.7	739.5
5°	734.4	740.2	727.8	724.2	727.1
7.5°	728.5	730.7	712.5	703.0	703.7
10°	719.8	717.6	691.3	675.3	673.1
12.5°	709.6	702.3	665.8	642.5	637.4
15°	697.2	682.6	637.4	607.5	598.0
17.5°	682.6	661.4	606.0	566.6	555.0
20°	667.3	638.1	571.7	522.9	508.3
22.5°	649.0	611.9	534.6	476.9	458.7
25°	629.4	585.6	496.6	431.0	409.1
27.5°	608.9	557.2	456.5	384.3	358.8
30°	586.3	527.3	416.4	336.9	310.7
32.5°	563.0	496.6	374.8	293.2	264.0
35°	538.9	464.5	334.0	248.7	218.8
37.5°	514.1	432.5	294.6	206.4	175.8
40°	488.6	399.6	254.5	166.3	136.4
42.5°	463.8	366.8	216.6	128.4	100.6
45°	435.4	334.0	179.4	95.5	69.3
47.5°	409.8	301.9	143.7	64.9	40.8
50°	382.1	267.6	111.6	37.9	17.5
52.5°	354.4	235.6	81.7	16.8	13.1
55°	327.4	203.5	54.0	12.4	10.2
57.5°	299.0	171.4	29.2	9.5	7.3
60°	271.3	140.0	14.6	7.3	5.1
62.5°	242.8	110.1	11.7	4.4	2.9
65°	214.4	82.4	8.0	2.9	2.2
67.5°	186.0	56.2	5.1	1.5	0.7
70°	156.8	34.3	2.9	0.7	0.7
72.5°	129.1	17.5	1.5	0.7	0.7
75°	102.1	10.9	0.7	0.7	0.0
77.5°	75.8	5.8	0.7	0.7	0.0
80°	51.8	2.2	0.0	0.0	0.0
82.5°	29.9	0.7	0.0	0.0	0.0
85°	10.9	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	17.00	18.33	17.36	18.64	18.96	0.00	0.00	0.00	0.00	0.00
	3H	18.54	19.72	18.92	20.05	20.41	0.00	0.00	0.00	0.00	0.00
	4H	19.14	20.23	19.54	20.58	20.97	0.00	0.00	0.00	0.00	0.00
	6H	19.55	20.56	19.97	20.93	21.32	0.00	0.00	0.00	0.00	0.00
	8H	19.65	20.60	20.08	21.00	21.40	0.00	0.00	0.00	0.00	0.00
	12H	19.67	20.58	20.10	20.96	21.39	0.00	0.00	0.00	0.00	0.00
4H	2H	16.78	17.87	17.18	18.22	18.61	0.00	0.00	0.00	0.00	0.00
	3H	18.34	19.24	18.75	19.64	20.04	0.00	0.00	0.00	0.00	0.00
	4H	18.92	19.72	19.36	20.14	20.58	0.00	0.00	0.00	0.00	0.00
	6H	19.38	20.07	19.85	20.52	20.98	0.00	0.00	0.00	0.00	0.00
	8H	19.50	20.14	19.97	20.59	21.06	0.00	0.00	0.00	0.00	0.00
	12H	19.54	20.11	20.03	20.59	21.07	0.00	0.00	0.00	0.00	0.00
8H	4H	18.79	19.43	19.26	19.88	20.35	0.00	0.00	0.00	0.00	0.00
	6H	19.23	19.75	19.73	20.25	20.73	0.00	0.00	0.00	0.00	0.00
	8H	19.35	19.81	19.87	20.33	20.82	0.00	0.00	0.00	0.00	0.00
	12H	19.39	19.81	19.91	20.30	20.87	0.00	0.00	0.00	0.00	0.00
12H	4H	18.74	19.31	19.23	19.79	20.27	0.00	0.00	0.00	0.00	0.23
	6H	19.17	19.63	19.69	20.15	20.64	0.00	0.00	0.00	0.00	0.07
	8H	19.30	19.71	19.82	20.21	20.78	0.00	0.00	0.00	0.00	0.03