

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: P1056048

Luminaire Tested: S124R3DR-S575D927-X4F0-XX-UDD-F-W

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1056048  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-7)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/25/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S124R3DR-S575D927-X4F0-XX-UDD-F-W  
Description: DEFINE 4, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
CORE LIGHT ENGINE  
Light Source: 2700K CCT, 90 CRI LEDS  
Ballast/Driver: -

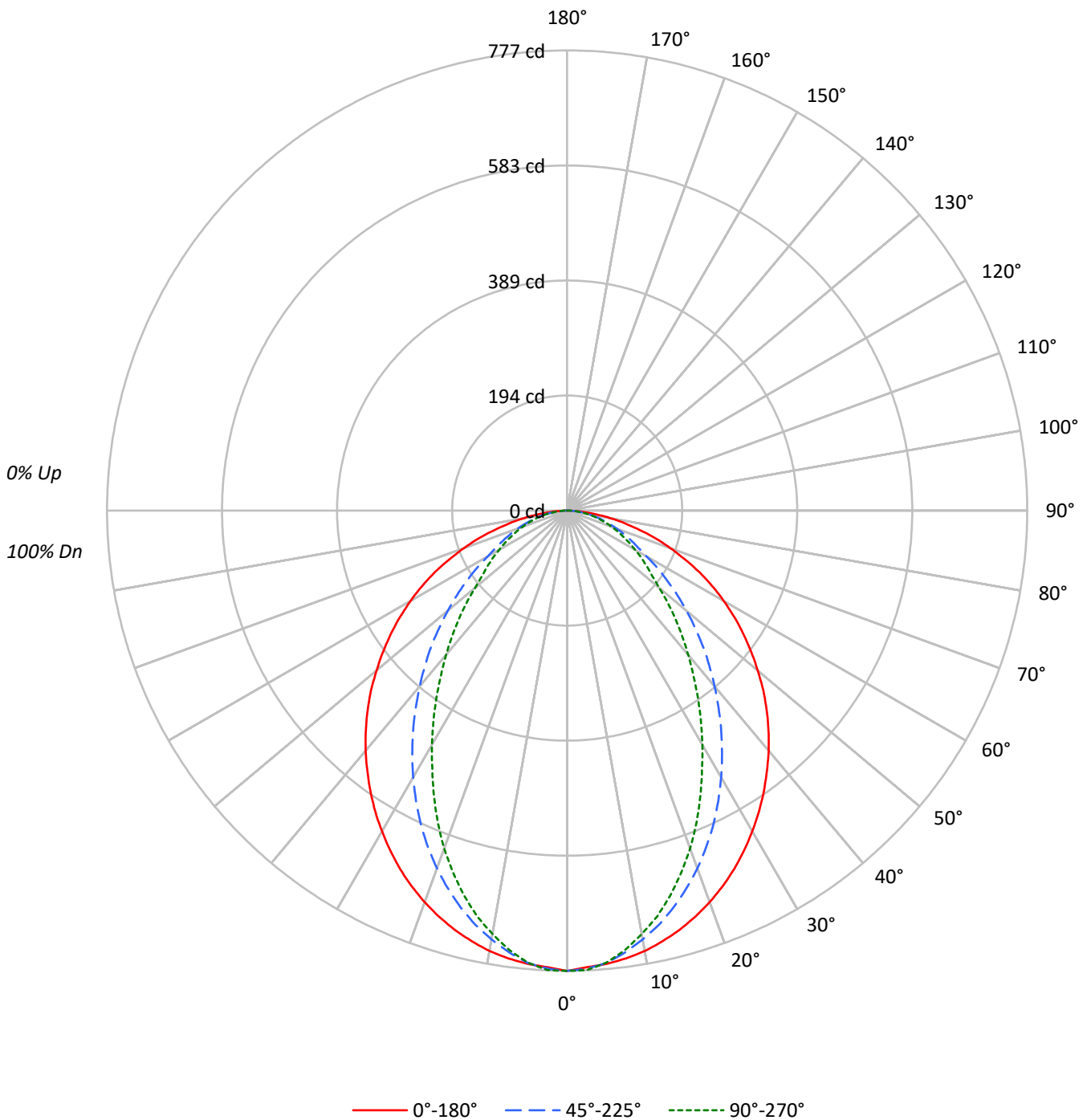
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1548.5 lumens  
Efficiency: N/A  
Efficacy: 81.1 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 0.95 / 1.12  
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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	110	105	102	98	107	103	100	97	99	96	93	95	93	91	92	90	88	86
2	101	93	87	82	98	91	86	81	88	83	79	85	81	77	82	78	76	73
3	93	83	75	69	90	81	74	69	79	73	68	76	71	67	73	69	65	63
4	85	74	66	60	83	73	65	60	71	64	59	68	63	58	66	61	57	55
5	79	67	59	53	77	66	58	52	64	57	52	62	56	51	60	55	51	49
6	73	61	53	47	72	60	52	46	58	51	46	57	50	46	55	50	45	43
7	68	56	47	42	67	55	47	42	53	46	41	52	46	41	51	45	41	39
8	64	51	43	38	62	51	43	38	49	42	37	48	42	37	47	41	37	35
9	60	47	39	34	59	47	39	34	46	39	34	45	38	34	44	38	34	32
10	56	44	36	31	55	43	36	31	42	36	31	41	35	31	41	35	31	29

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

	0°	45°	90°
0°	6873	6873	6873
5°	6819	6804	6798
10°	6779	6600	6518
15°	6708	6351	6158
20°	6620	6050	5711
25°	6513	5704	5190
30°	6384	5309	4660
35°	6248	4897	4149
40°	6108	4470	3671
45°	5958	4056	3226
50°	5776	3620	2785
55°	5600	3183	2531
60°	5402	2732	2347
65°	5159	2477	2190
70°	4793	2293	2071
75°	4338	2111	1954
80°	3788	1950	1833
85°	2901	1796	1684

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 5958 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	72.4	4.7
10°-20°	196.3	12.7
20°-30°	271.9	17.6
30°-40°	291.8	18.8
40°-50°	265.4	17.1
50°-60°	209.0	13.5
60°-70°	143.0	9.2
70°-80°	77.0	5.0
80°-90°	21.8	1.4
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°	540.6	34.9
0°-40°	832.3	53.8
0°-60°	1306.7	84.4
0°-90°	1548.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1548.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	777	777	777	777	777	
5°	768	777	767	763	766	73
15°	733	725	694	675	673	207
25°	668	640	585	542	532	307
35°	579	534	454	399	384	362
45°	476	416	324	268	258	367
55°	363	294	206	166	164	325
65°	247	176	118	105	105	243
75°	127	77	62	57	57	136
85°	29	20	18	17	17	34
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	777.4	777.4	777.4	777.4	777.4
2.5°	771.7	780.9	774.0	775.2	776.3
5°	768.3	776.9	766.6	762.6	766.0
7.5°	762.6	768.3	752.3	744.8	748.3
10°	755.1	756.3	735.1	724.2	726.0
12.5°	744.8	742.0	716.2	700.8	701.9
15°	732.8	724.8	693.9	675.0	672.8
17.5°	719.1	705.9	669.3	645.3	640.7
20°	703.6	685.9	643.0	612.1	607.0
22.5°	686.5	663.6	614.4	577.8	570.4
25°	667.6	640.1	584.7	542.3	532.0
27.5°	647.0	615.0	552.6	506.3	493.1
30°	625.3	588.7	520.0	470.2	456.5
32.5°	603.0	561.8	486.8	434.2	419.9
35°	578.9	533.7	453.7	398.7	384.4
37.5°	554.3	504.6	419.9	364.4	349.5
40°	529.2	475.4	387.3	330.1	318.1
42.5°	503.4	445.6	355.3	298.0	287.2
45°	476.5	415.9	324.4	268.3	258.0
47.5°	449.1	385.6	292.9	240.3	230.5
50°	419.9	355.3	263.2	212.8	202.5
52.5°	391.9	324.4	234.5	185.9	180.8
55°	363.3	294.0	206.5	166.5	164.2
57.5°	334.7	263.7	180.8	151.0	148.7
60°	305.5	234.0	154.5	135.0	132.7
62.5°	276.3	204.8	135.0	119.6	118.4
65°	246.6	176.2	118.4	105.3	104.7
67.5°	215.1	148.7	103.5	92.7	92.1
70°	185.4	121.3	88.7	80.1	80.1
72.5°	157.3	96.1	74.9	68.1	68.1
75°	127.0	77.2	61.8	56.6	57.2
77.5°	100.1	60.6	49.8	46.3	46.3
80°	74.4	45.2	38.3	35.5	36.0
82.5°	50.3	31.5	27.5	25.7	25.7
85°	28.6	19.5	17.7	16.6	16.6
87.5°	10.3	9.2	8.6	7.4	8.0
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	17.84	19.36	18.20	19.68	19.99	13.62	15.14	13.98	15.45	15.77
	3H	19.61	20.98	19.99	21.31	21.67	15.23	16.60	15.61	16.93	17.29
	4H	20.29	21.57	20.69	21.92	22.30	15.86	17.14	16.26	17.49	17.87
	6H	20.80	21.98	21.21	22.35	22.74	16.36	17.55	16.77	17.91	18.30
	8H	20.96	22.09	21.38	22.48	22.88	16.53	17.66	16.95	18.05	18.45
	12H	21.06	22.14	21.49	22.52	22.95	16.65	17.73	17.08	18.12	18.54
4H	2H	17.93	19.22	18.33	19.57	19.95	14.33	15.62	14.73	15.97	16.35
	3H	19.88	20.95	20.29	21.35	21.75	16.14	17.21	16.55	17.61	18.01
	4H	20.63	21.60	21.07	22.01	22.45	16.88	17.84	17.31	18.26	18.70
	6H	21.27	22.11	21.73	22.55	23.01	17.49	18.33	17.95	18.78	19.24
	8H	21.49	22.27	21.95	22.72	23.18	17.71	18.49	18.17	18.94	19.41
	12H	21.64	22.35	22.13	22.82	23.29	17.88	18.58	18.36	19.06	19.53
8H	4H	20.69	21.48	21.16	21.92	22.39	17.27	18.05	17.73	18.50	18.96
	6H	21.39	22.04	21.89	22.53	23.01	18.00	18.65	18.50	19.14	19.62
	8H	21.66	22.24	22.17	22.75	23.24	18.29	18.87	18.80	19.38	19.87
	12H	21.88	22.39	22.39	22.88	23.45	18.53	19.05	19.04	19.54	20.10
12H	4H	20.68	21.38	21.17	21.86	22.33	17.32	18.02	17.81	18.50	18.97
	6H	21.38	21.97	21.90	22.48	22.96	18.08	18.67	18.59	19.17	19.66
	8H	21.69	22.21	22.20	22.70	23.26	18.43	18.95	18.94	19.44	20.00