

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: P1056042

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

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1056042  
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-S575D840-X4F0-XX-UDD-F-W  
Description: DEFINE 4, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
CORE LIGHT ENGINE  
Light Source: 4000K CCT, 80 CRI LEDS  
Ballast/Driver: -

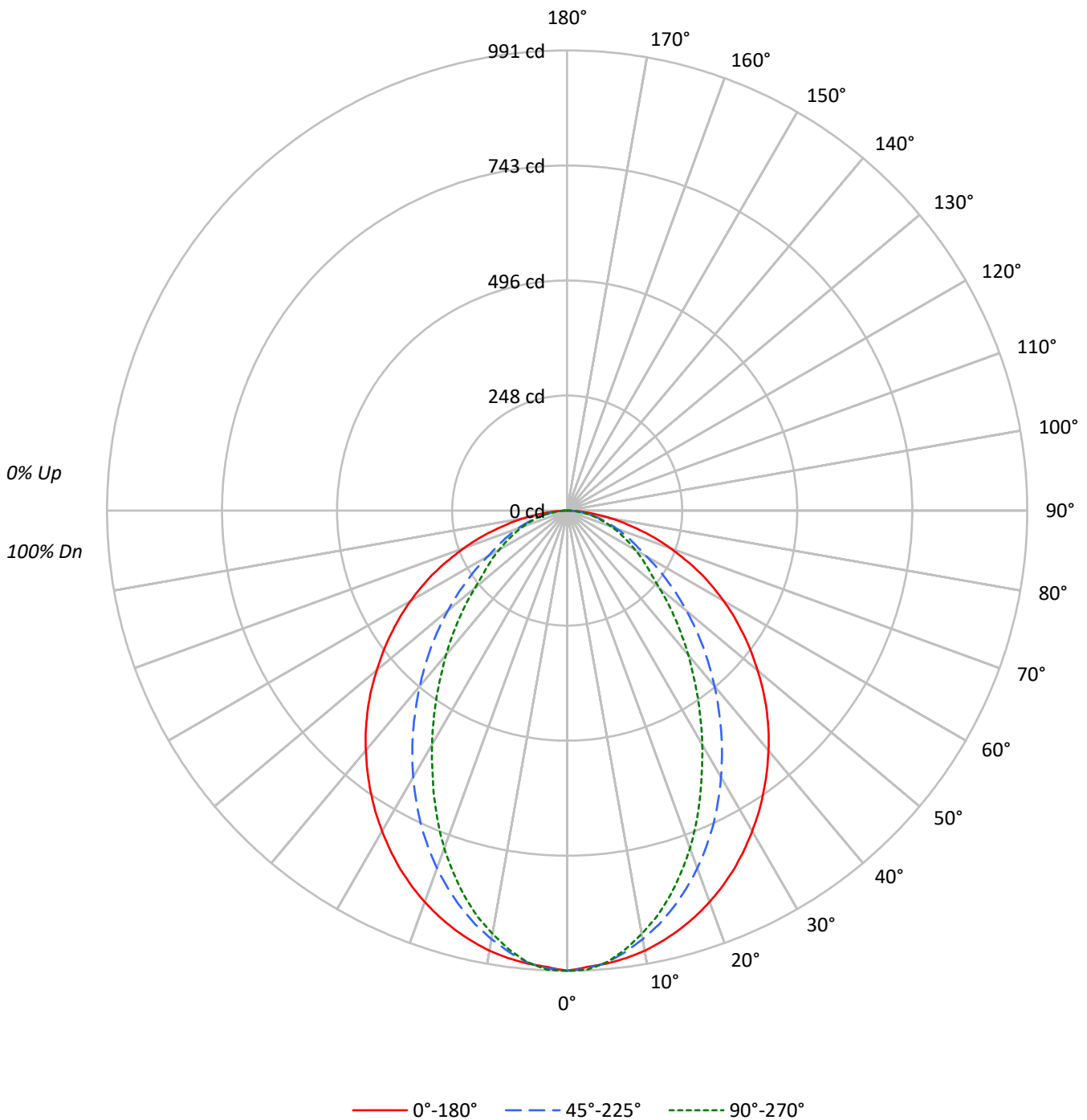
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1974.0 lumens  
Efficiency: N/A  
Efficacy: 103.3 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 (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	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°	8763	8763	8763
5°	8692	8673	8667
10°	8642	8413	8308
15°	8551	8097	7850
20°	8440	7712	7281
25°	8303	7271	6616
30°	8138	6768	5942
35°	7965	6242	5290
40°	7786	5698	4680
45°	7596	5170	4112
50°	7363	4615	3551
55°	7138	4059	3226
60°	6886	3482	2992
65°	6575	3159	2793
70°	6108	2921	2639
75°	5531	2692	2490
80°	4827	2490	2337
85°	3703	2293	2140

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 7596 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	92.3	4.7
10°-20°	250.3	12.7
20°-30°	346.6	17.6
30°-40°	372.0	18.8
40°-50°	338.3	17.1
50°-60°	266.4	13.5
60°-70°	182.3	9.2
70°-80°	98.1	5.0
80°-90°	27.8	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°	689.1	34.9
0°-40°	1061.1	53.8
0°-60°	1665.7	84.4
0°-90°	1974.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1974.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	991	991	991	991	991	
5°	979	990	977	972	976	93
15°	934	924	885	860	858	263
25°	851	816	745	691	678	392
35°	738	680	578	508	490	462
45°	608	530	414	342	329	468
55°	463	375	263	212	209	414
65°	314	225	151	134	134	310
75°	162	98	79	72	73	173
85°	36	25	23	21	21	44
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	991.1	991.1	991.1	991.1	991.1
2.5°	983.8	995.5	986.7	988.2	989.6
5°	979.4	990.3	977.2	972.1	976.5
7.5°	972.1	979.4	959.0	949.5	953.9
10°	962.6	964.1	937.1	923.3	925.4
12.5°	949.5	945.9	913.0	893.4	894.8
15°	934.2	924.0	884.6	860.5	857.6
17.5°	916.7	899.9	853.2	822.6	816.8
20°	897.0	874.4	819.7	780.3	773.8
22.5°	875.1	846.0	783.2	736.6	727.1
25°	851.1	816.1	745.3	691.3	678.2
27.5°	824.8	784.0	704.5	645.4	628.6
30°	797.1	750.4	662.9	599.5	582.0
32.5°	768.6	716.1	620.6	553.5	535.3
35°	738.0	680.4	578.3	508.3	490.1
37.5°	706.7	643.2	535.3	464.5	445.6
40°	674.6	606.0	493.7	420.8	405.5
42.5°	641.8	568.1	452.9	379.9	366.1
45°	607.5	530.2	413.5	342.0	328.9
47.5°	572.5	491.5	373.4	306.3	293.9
50°	535.3	452.9	335.5	271.3	258.2
52.5°	499.5	413.5	299.0	237.0	230.4
55°	463.1	374.8	263.3	212.2	209.3
57.5°	426.6	336.2	230.4	192.5	189.6
60°	389.4	298.3	196.9	172.1	169.2
62.5°	352.2	261.1	172.1	152.4	151.0
65°	314.3	224.6	151.0	134.2	133.5
67.5°	274.2	189.6	132.0	118.1	117.4
70°	236.3	154.6	113.0	102.1	102.1
72.5°	200.5	122.5	95.5	86.8	86.8
75°	161.9	98.5	78.8	72.2	72.9
77.5°	127.6	77.3	63.4	59.1	59.1
80°	94.8	57.6	48.9	45.2	45.9
82.5°	64.2	40.1	35.0	32.8	32.8
85°	36.5	24.8	22.6	21.1	21.1
87.5°	13.1	11.7	10.9	9.5	10.2
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	18.68	20.21	19.05	20.52	20.84	14.46	15.98	14.82	16.30	16.61
	3H	20.46	21.83	20.84	22.16	22.52	16.07	17.44	16.45	17.77	18.13
	4H	21.13	22.42	21.53	22.76	23.14	16.70	17.99	17.10	18.34	18.72
	6H	21.64	22.83	22.05	23.19	23.59	17.20	18.39	17.61	18.76	19.15
	8H	21.80	22.93	22.23	23.32	23.72	17.37	18.50	17.80	18.89	19.29
	12H	21.90	22.99	22.33	23.37	23.80	17.49	18.58	17.92	18.96	19.39
4H	2H	18.78	20.06	19.18	20.41	20.79	15.18	16.46	15.58	16.81	17.19
	3H	20.72	21.79	21.13	22.19	22.59	16.99	18.06	17.40	18.46	18.86
	4H	21.48	22.44	21.91	22.86	23.30	17.72	18.69	18.16	19.10	19.54
	6H	22.11	22.95	22.57	23.40	23.85	18.34	19.18	18.80	19.62	20.08
	8H	22.33	23.12	22.80	23.56	24.03	18.55	19.34	19.02	19.78	20.25
	12H	22.49	23.19	22.97	23.67	24.14	18.72	19.42	19.20	19.90	20.37
8H	4H	21.54	22.32	22.00	22.76	23.23	18.11	18.90	18.57	19.34	19.81
	6H	22.23	22.88	22.73	23.37	23.85	18.84	19.49	19.34	19.98	20.46
	8H	22.50	23.09	23.02	23.59	24.08	19.13	19.71	19.64	20.22	20.71
	12H	22.72	23.24	23.23	23.73	24.29	19.38	19.89	19.88	20.38	20.95
12H	4H	21.53	22.23	22.01	22.71	23.18	18.17	18.87	18.65	19.35	19.82
	6H	22.23	22.81	22.74	23.32	23.81	18.93	19.51	19.44	20.02	20.51
	8H	22.54	23.05	23.05	23.54	24.11	19.27	19.79	19.78	20.28	20.85