

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: P1056051

Luminaire Tested: S124R3DR-S575D930-X4F0-XX-UDD-F-W

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1056051  
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-S575D930-X4F0-XX-UDD-F-W  
Description: DEFINE 4, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
CORE LIGHT ENGINE  
Light Source: 3000K CCT, 90 CRI LEDS  
Ballast/Driver: -

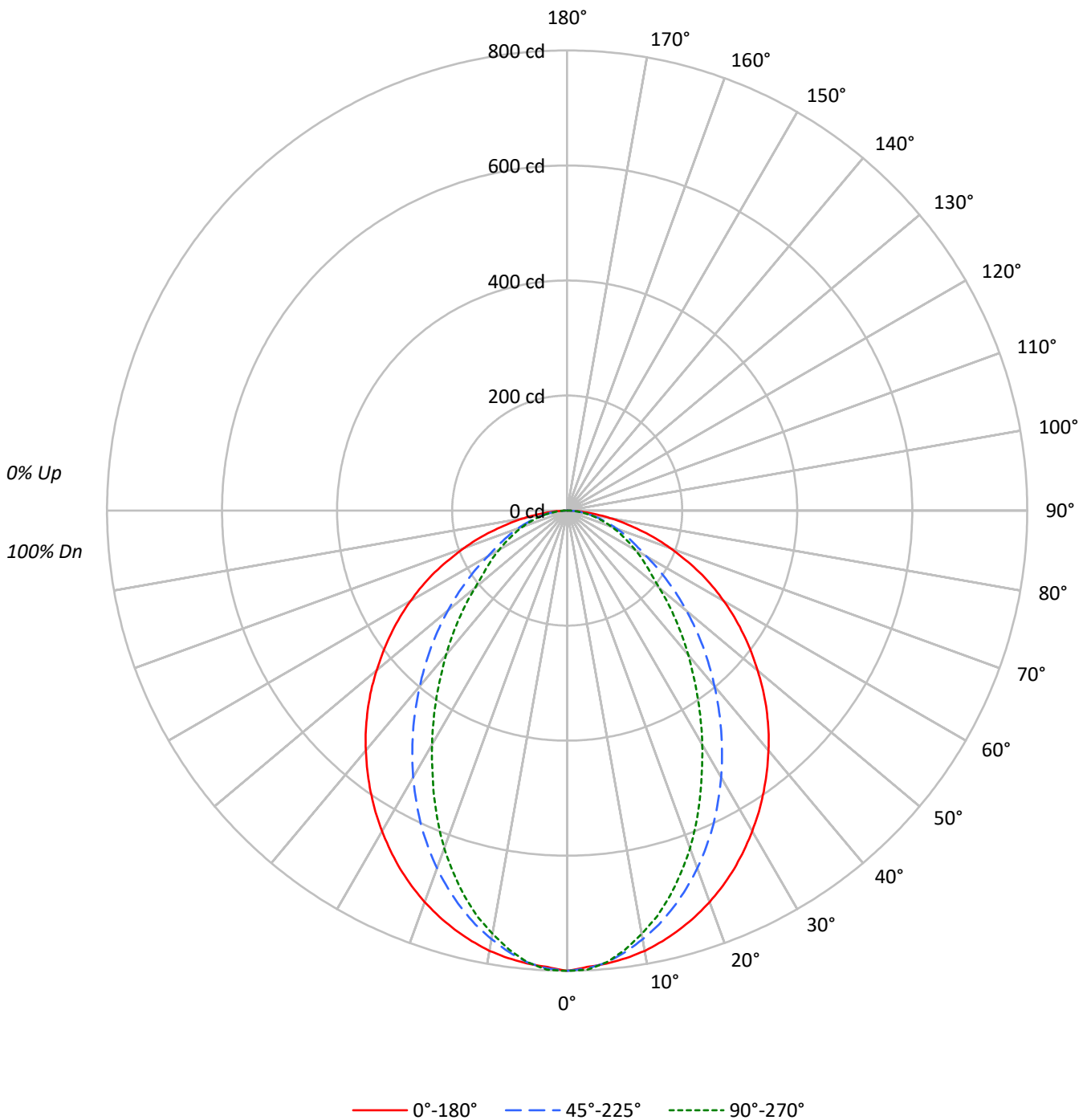
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1593.6 lumens  
Efficiency: N/A  
Efficacy: 83.4 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	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	110	105	102	98	107	103	100	97	99	96	93	95	93	91	92	90	88	86													86															
2	101	93	87	82	98	91	86	81	88	83	79	85	81	77	82	78	76	73													73															
3	93	83	75	69	90	81	74	69	79	73	68	76	71	67	73	69	65	63													63															
4	85	74	66	60	83	73	65	60	71	64	59	68	63	58	66	61	57	55													55															
5	79	67	59	53	77	66	58	52	64	57	52	62	56	51	60	55	51	49													49															
6	73	61	53	47	72	60	52	46	58	51	46	57	50	46	55	50	45	43													43															
7	68	56	47	42	67	55	47	42	53	46	41	52	46	41	51	45	41	39													39															
8	64	51	43	38	62	51	43	38	49	42	37	48	42	37	47	41	37	35													35															
9	60	47	39	34	59	47	39	34	46	39	34	45	38	34	44	38	34	32													32															
10	56	44	36	31	55	43	36	31	42	36	31	41	35	31	41	35	31	29													29															

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

	0°	45°	90°
0°	7074	7074	7074
5°	7018	7002	6997
10°	6978	6793	6707
15°	6903	6537	6338
20°	6814	6227	5878
25°	6703	5870	5341
30°	6570	5464	4796
35°	6431	5039	4270
40°	6286	4600	3779
45°	6132	4174	3320
50°	5945	3725	2866
55°	5763	3276	2605
60°	5559	2812	2415
65°	5310	2550	2253
70°	4932	2360	2130
75°	4465	2173	2012
80°	3895	2006	1889
85°	2982	1856	1735

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 6132 cd/sqm

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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	74.5	4.7
10°-20°	202.1	12.7
20°-30°	279.8	17.6
30°-40°	300.3	18.8
40°-50°	273.1	17.1
50°-60°	215.0	13.5
60°-70°	147.2	9.2
70°-80°	79.2	5.0
80°-90°	22.4	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°	556.3	34.9
0°-40°	856.6	53.8
0°-60°	1344.8	84.4
0°-90°	1593.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1593.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	800	800	800	800	800	
5°	791	800	789	785	788	75
15°	754	746	714	695	692	213
25°	687	659	602	558	548	316
35°	596	549	467	410	396	373
45°	490	428	334	276	266	378
55°	374	303	212	171	169	334
65°	254	181	122	108	108	250
75°	131	80	64	58	59	140
85°	29	20	18	17	17	35
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	800.1	800.1	800.1	800.1	800.1
2.5°	794.2	803.7	796.6	797.8	799.0
5°	790.7	799.5	788.9	784.8	788.4
7.5°	784.8	790.7	774.2	766.6	770.1
10°	777.2	778.3	756.6	745.4	747.1
12.5°	766.6	763.6	737.1	721.2	722.4
15°	754.2	746.0	714.2	694.7	692.4
17.5°	740.1	726.5	688.9	664.1	659.4
20°	724.2	705.9	661.8	630.0	624.7
22.5°	706.5	683.0	632.3	594.7	587.0
25°	687.1	658.8	601.7	558.1	547.5
27.5°	665.9	632.9	568.7	521.1	507.5
30°	643.5	605.8	535.2	484.0	469.8
32.5°	620.6	578.2	501.0	446.9	432.2
35°	595.8	549.3	466.9	410.4	395.6
37.5°	570.5	519.3	432.2	375.0	359.7
40°	544.6	489.3	398.6	339.7	327.4
42.5°	518.1	458.6	365.6	306.7	295.6
45°	490.4	428.0	333.8	276.1	265.5
47.5°	462.2	396.8	301.4	247.3	237.3
50°	432.2	365.6	270.8	219.0	208.4
52.5°	403.3	333.8	241.4	191.3	186.0
55°	373.9	302.6	212.5	171.3	169.0
57.5°	344.4	271.4	186.0	155.4	153.1
60°	314.4	240.8	159.0	138.9	136.6
62.5°	284.4	210.8	138.9	123.1	121.9
65°	253.8	181.3	121.9	108.3	107.7
67.5°	221.4	153.1	106.6	95.4	94.8
70°	190.8	124.8	91.3	82.4	82.4
72.5°	161.9	98.9	77.1	70.1	70.1
75°	130.7	79.5	63.6	58.3	58.9
77.5°	103.0	62.4	51.2	47.7	47.7
80°	76.5	46.5	39.4	36.5	37.1
82.5°	51.8	32.4	28.3	26.5	26.5
85°	29.4	20.0	18.3	17.1	17.1
87.5°	10.6	9.4	8.8	7.7	8.2
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	17.94	19.46	18.30	19.78	20.09	13.72	15.24	14.08	15.55	15.87
	3H	19.71	21.08	20.09	21.41	21.77	15.33	16.70	15.70	17.02	17.39
	4H	20.39	21.67	20.79	22.02	22.40	15.96	17.25	16.36	17.59	17.97
	6H	20.89	22.08	21.31	22.45	22.84	16.46	17.65	16.87	18.01	18.41
	8H	21.06	22.19	21.48	22.58	22.98	16.63	17.76	17.06	18.15	18.55
	12H	21.16	22.24	21.59	22.62	23.05	16.75	17.84	17.18	18.22	18.65
4H	2H	18.03	19.32	18.43	19.67	20.05	14.43	15.72	14.83	16.07	16.45
	3H	19.98	21.05	20.39	21.45	21.85	16.24	17.31	16.65	17.71	18.11
	4H	20.73	21.70	21.17	22.11	22.55	16.98	17.94	17.41	18.36	18.80
	6H	21.37	22.21	21.83	22.65	23.11	17.60	18.44	18.05	18.88	19.34
	8H	21.59	22.37	22.05	22.82	23.28	17.81	18.60	18.28	19.04	19.51
	12H	21.74	22.44	22.23	22.92	23.39	17.98	18.68	18.46	19.16	19.63
8H	4H	20.79	21.58	21.26	22.02	22.49	17.37	18.15	17.83	18.60	19.06
	6H	21.49	22.14	21.99	22.63	23.11	18.10	18.75	18.60	19.24	19.72
	8H	21.76	22.34	22.27	22.85	23.34	18.39	18.97	18.90	19.48	19.97
	12H	21.98	22.49	22.49	22.98	23.55	18.63	19.15	19.14	19.64	20.21
12H	4H	20.78	21.49	21.27	21.96	22.43	17.42	18.13	17.91	18.60	19.07
	6H	21.48	22.07	22.00	22.58	23.06	18.18	18.77	18.70	19.28	19.76
	8H	21.79	22.31	22.30	22.80	23.36	18.53	19.05	19.04	19.54	20.10