

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: P1056057

Luminaire Tested: S124R3DR-S575D940-X4F0-XX-UDD-F-W

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1056057  
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-S575D940-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, 90 CRI LEDS  
Ballast/Driver: -

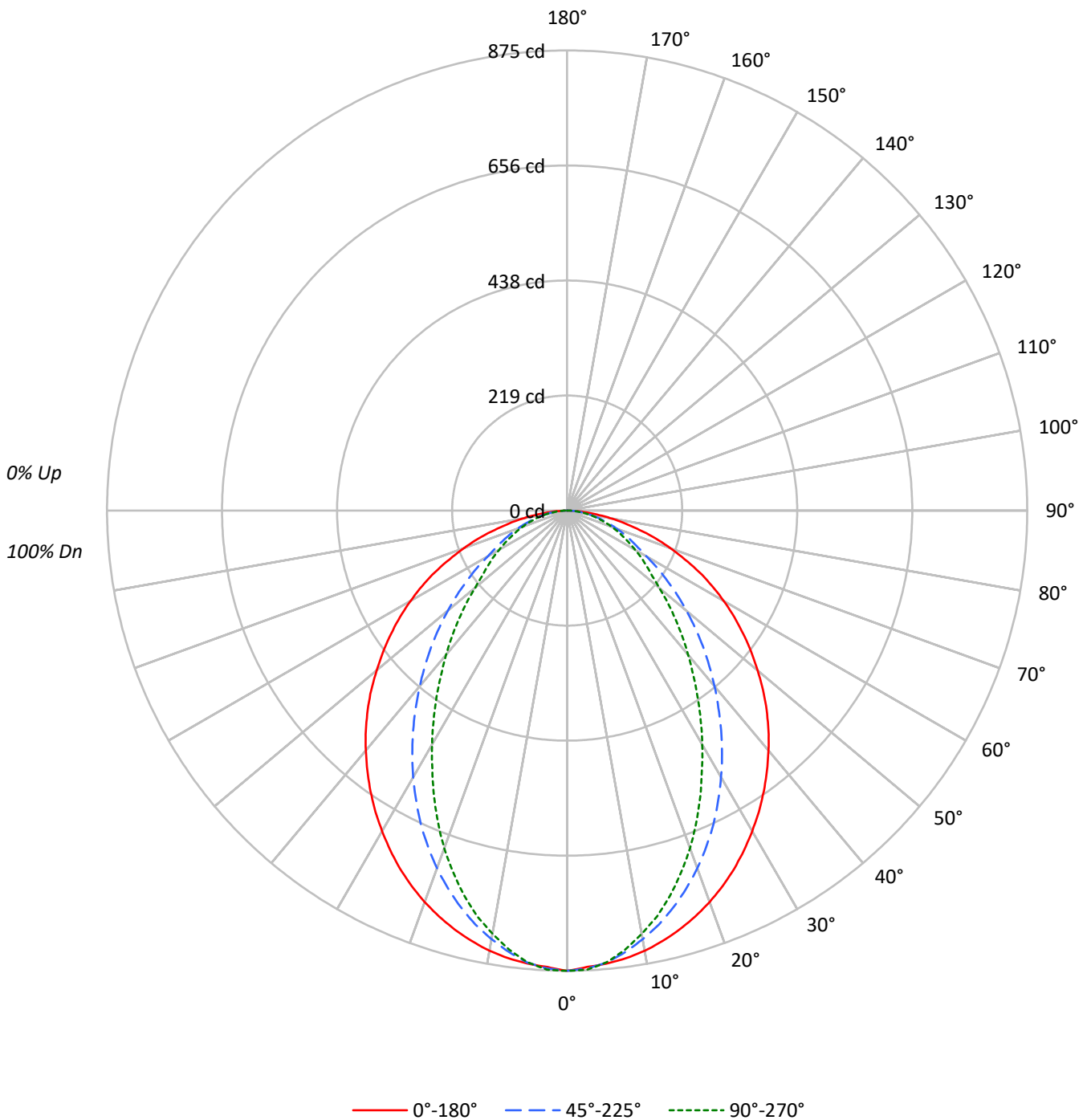
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1743.0 lumens  
Efficiency: N/A  
Efficacy: 91.3 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	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				
2	101	93	87	82	98	91	86	81	88	83	79	85	81	77	82	78	75					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°	7737	7737	7737
5°	7675	7658	7652
10°	7631	7429	7337
15°	7551	7150	6932
20°	7453	6810	6428
25°	7331	6420	5842
30°	7185	5975	5246
35°	7034	5511	4670
40°	6874	5031	4132
45°	6707	4565	3631
50°	6502	4074	3136
55°	6303	3584	2849
60°	6081	3075	2642
65°	5805	2789	2464
70°	5392	2580	2332
75°	4885	2374	2200
80°	4262	2194	2067
85°	3266	2029	1897

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 6707 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	81.5	4.7
10°-20°	221.0	12.7
20°-30°	306.0	17.6
30°-40°	328.4	18.8
40°-50°	298.7	17.1
50°-60°	235.2	13.5
60°-70°	161.0	9.2
70°-80°	86.7	5.0
80°-90°	24.5	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°	608.5	34.9
0°-40°	936.9	53.8
0°-60°	1470.8	84.4
0°-90°	1743.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1743.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	875	875	875	875	875	
5°	865	874	863	858	862	82
15°	825	816	781	760	757	233
25°	752	721	658	610	599	346
35°	652	601	511	449	433	408
45°	536	468	365	302	290	414
55°	409	331	232	187	185	366
65°	278	198	133	118	118	274
75°	143	87	70	64	64	153
85°	32	22	20	19	19	39
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	875.1	875.1	875.1	875.1	875.1
2.5°	868.7	879.0	871.3	872.5	873.8
5°	864.8	874.5	862.9	858.4	862.2
7.5°	858.4	864.8	846.8	838.4	842.3
10°	850.0	851.3	827.5	815.2	817.2
12.5°	838.4	835.2	806.2	788.8	790.1
15°	824.9	815.9	781.1	759.9	757.3
17.5°	809.4	794.6	753.4	726.4	721.2
20°	792.1	772.1	723.8	689.0	683.2
22.5°	772.7	747.0	691.6	650.4	642.0
25°	751.5	720.6	658.1	610.5	598.9
27.5°	728.3	692.2	622.0	569.9	555.1
30°	703.8	662.6	585.3	529.3	513.9
32.5°	678.7	632.4	548.0	488.8	472.7
35°	651.7	600.8	510.6	448.8	432.7
37.5°	624.0	568.0	472.7	410.2	393.4
40°	595.6	535.1	435.9	371.6	358.0
42.5°	566.7	501.6	399.9	335.5	323.3
45°	536.4	468.1	365.1	302.0	290.4
47.5°	505.5	434.0	329.7	270.5	259.5
50°	472.7	399.9	296.2	239.5	228.0
52.5°	441.1	365.1	264.0	209.3	203.5
55°	408.9	331.0	232.5	187.4	184.8
57.5°	376.7	296.9	203.5	170.0	167.4
60°	343.9	263.4	173.9	152.0	149.4
62.5°	311.0	230.5	152.0	134.6	133.3
65°	277.5	198.3	133.3	118.5	117.8
67.5°	242.1	167.4	116.6	104.3	103.7
70°	208.6	136.5	99.8	90.2	90.2
72.5°	177.1	108.2	84.4	76.6	76.6
75°	143.0	86.9	69.5	63.8	64.4
77.5°	112.7	68.3	56.0	52.2	52.2
80°	83.7	50.9	43.1	39.9	40.6
82.5°	56.7	35.4	30.9	29.0	29.0
85°	32.2	21.9	20.0	18.7	18.7
87.5°	11.6	10.3	9.7	8.4	9.0
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	18.25	19.78	18.62	20.09	20.40	14.03	15.55	14.39	15.87	16.18
	3H	20.03	21.40	20.40	21.72	22.08	15.64	17.01	16.02	17.34	17.70
	4H	20.70	21.98	21.10	22.33	22.71	16.27	17.56	16.67	17.91	18.28
	6H	21.21	22.40	21.62	22.76	23.15	16.77	17.96	17.18	18.33	18.72
	8H	21.37	22.50	21.80	22.89	23.29	16.94	18.07	17.37	18.46	18.86
	12H	21.47	22.55	21.90	22.94	23.36	17.06	18.15	17.49	18.53	18.96
4H	2H	18.35	19.63	18.75	19.98	20.36	14.75	16.03	15.15	16.38	16.76
	3H	20.29	21.36	20.70	21.76	22.16	16.55	17.62	16.96	18.02	18.42
	4H	21.05	22.01	21.48	22.43	22.86	17.29	18.26	17.72	18.67	19.11
	6H	21.68	22.52	22.14	22.96	23.42	17.91	18.75	18.37	19.19	19.65
	8H	21.90	22.69	22.36	23.13	23.60	18.12	18.91	18.59	19.35	19.82
	12H	22.06	22.76	22.54	23.24	23.71	18.29	18.99	18.77	19.47	19.94
8H	4H	21.10	21.89	21.57	22.33	22.80	17.68	18.46	18.14	18.91	19.38
	6H	21.80	22.45	22.30	22.94	23.42	18.41	19.06	18.91	19.55	20.03
	8H	22.07	22.65	22.58	23.16	23.65	18.70	19.28	19.21	19.79	20.28
	12H	22.29	22.80	22.80	23.30	23.86	18.95	19.46	19.46	19.95	20.52
12H	4H	21.09	21.80	21.58	22.27	22.75	17.74	18.44	18.22	18.92	19.39
	6H	21.80	22.38	22.31	22.89	23.38	18.49	19.08	19.01	19.59	20.08
	8H	22.10	22.62	22.61	23.11	23.68	18.84	19.36	19.35	19.85	20.42