

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: P1055355

Luminaire Tested: S122R3DR-H485D940-X4F0-XX-UDD-F-W

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1055355  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-1)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/25/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S122R3DR-H485D940-X4F0-XX-UDD-F-W  
Description: DEFINE 2, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 4000K CCT, 90 CRI LEDS  
Ballast/Driver: -

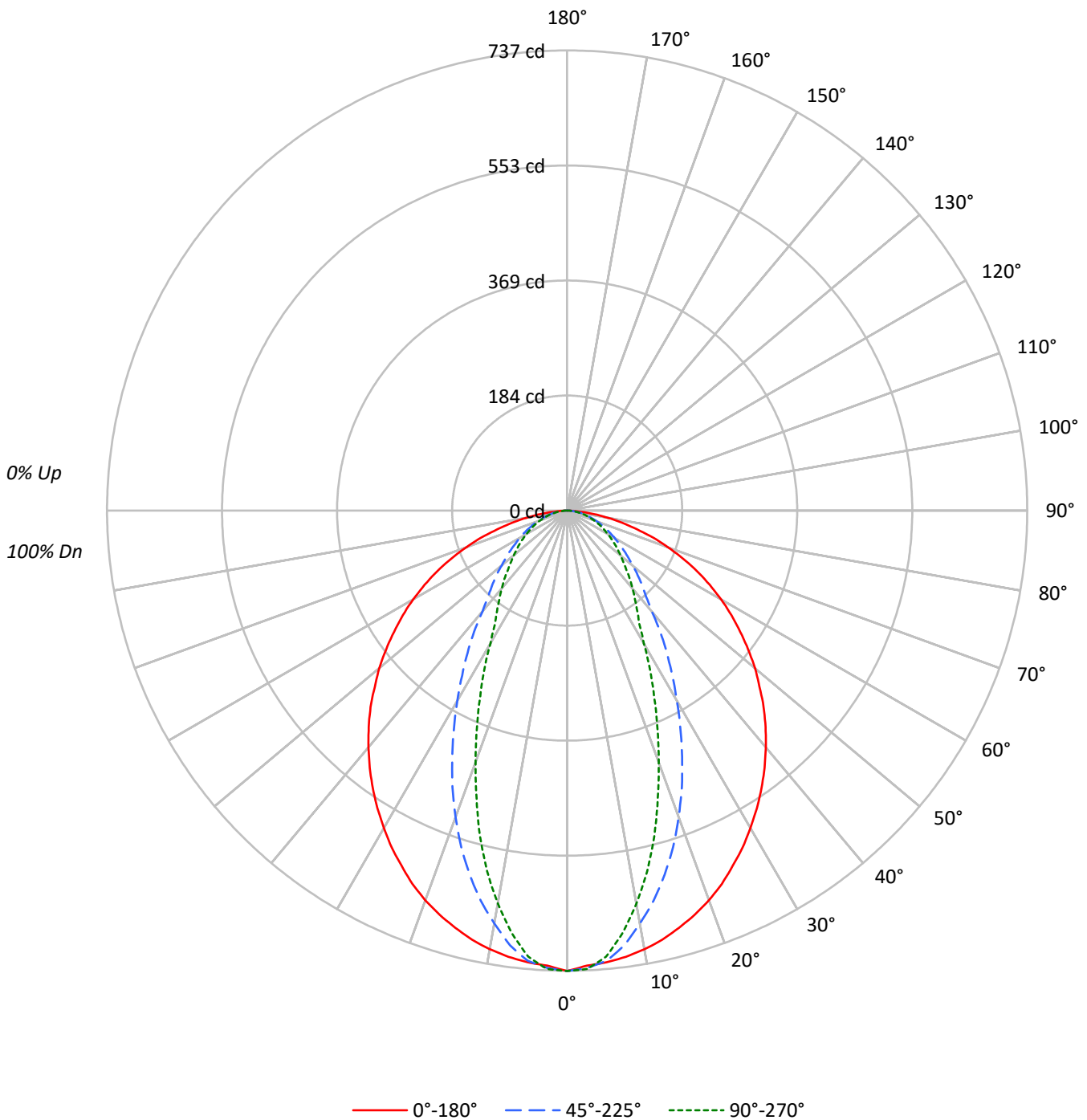
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1115.4 lumens  
Efficiency: N/A  
Efficacy: 64.5 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 0.71 / 0.9  
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 17.3  
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	110	106	102	99	108	104	101	97	100	97	94	96	94	92	92	91	89	87				87
2	102	95	89	84	99	93	87	83	89	85	81	86	82	79	83	80	77	75				75
3	94	85	78	72	92	83	77	71	80	75	70	78	73	69	75	71	68	66				66
4	87	76	69	63	85	75	68	62	73	66	61	71	65	61	68	64	60	58				58
5	81	69	61	55	79	68	61	55	66	60	55	64	59	54	63	58	54	52				52
6	75	63	55	50	74	63	55	49	61	54	49	59	53	49	58	52	48	46				46
7	71	58	50	45	69	58	50	45	56	49	44	55	49	44	53	48	44	42				42
8	66	54	46	41	65	53	46	41	52	45	40	51	45	40	50	44	40	38				38
9	62	50	43	37	61	49	42	37	48	42	37	47	41	37	46	41	37	35				35
10	59	47	39	35	58	46	39	34	45	39	34	44	38	34	43	38	34	32				32

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

	0°	45°	90°
0°	13971	13971	13971
5°	13813	13767	13638
10°	13724	12916	12301
15°	13569	11839	10582
20°	13389	10528	8639
25°	13122	9100	6896
30°	12842	7688	5382
35°	12550	6432	4522
40°	12245	5216	4026
45°	11928	4560	3601
50°	11578	4035	3289
55°	11181	3647	3055
60°	10795	3319	2849
65°	10284	3039	2681
70°	9528	2836	2526
75°	8440	2569	2394
80°	7201	2422	2215
85°	4956	2152	2000

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 11928 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	67.6	6.1
10°-20°	170.6	15.3
20°-30°	210.2	18.8
30°-40°	201.7	18.1
40°-50°	174.0	15.6
50°-60°	135.0	12.1
60°-70°	92.4	8.3
70°-80°	50.2	4.5
80°-90°	13.7	1.2
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°	448.4	40.2
0°-40°	650.1	58.3
0°-60°	959.1	86.0
0°-90°	1115.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1115.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	737	737	737	737	737	
5°	726	737	724	715	717	69
15°	692	671	604	554	540	195
25°	628	560	435	355	330	289
35°	543	430	278	207	196	339
45°	445	300	170	141	134	343
55°	338	180	110	96	92	303
65°	229	98	68	62	60	226
75°	115	45	35	33	33	124
85°	23	11	10	10	9	29
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	737.4	737.4	737.4	737.4	737.4
2.5°	729.4	741.7	733.1	733.1	735.0
5°	726.3	736.8	723.9	714.6	717.1
7.5°	720.8	728.2	702.3	682.5	681.9
10°	713.4	714.0	671.4	645.6	639.4
12.5°	704.1	694.3	640.0	601.2	591.9
15°	691.8	670.8	603.6	554.3	539.5
17.5°	678.8	646.8	564.8	503.1	482.8
20°	664.1	617.8	522.2	451.9	428.5
22.5°	647.4	590.1	479.7	402.6	378.0
25°	627.7	560.5	435.3	355.1	329.9
27.5°	608.6	530.3	392.8	313.2	287.3
30°	587.0	497.6	351.4	273.1	246.0
32.5°	565.4	464.3	313.2	234.9	214.6
35°	542.6	430.4	278.1	207.2	195.5
37.5°	519.2	397.1	244.8	188.7	178.2
40°	495.1	363.8	210.9	170.8	162.8
42.5°	470.4	331.1	187.4	156.0	148.6
45°	445.2	299.7	170.2	140.6	134.4
47.5°	418.0	268.2	153.5	127.6	122.1
50°	392.8	238.0	136.9	115.9	111.6
52.5°	365.6	208.4	123.3	105.4	101.7
55°	338.5	180.0	110.4	95.6	92.5
57.5°	312.0	152.9	98.0	86.3	83.9
60°	284.9	131.3	87.6	77.7	75.2
62.5°	257.1	114.1	77.7	69.7	67.2
65°	229.4	98.0	67.8	61.7	59.8
67.5°	200.4	82.6	59.2	54.3	53.0
70°	172.0	69.1	51.2	46.9	45.6
72.5°	144.3	56.1	43.2	40.1	38.8
75°	115.3	45.0	35.1	33.3	32.7
77.5°	90.0	35.1	28.4	27.1	26.5
80°	66.0	25.9	22.2	21.0	20.3
82.5°	43.8	17.9	16.0	15.4	14.8
85°	22.8	11.1	9.9	9.9	9.2
87.5°	7.4	4.9	4.9	4.9	4.3
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	18.77	20.24	19.14	20.55	20.87	13.58	15.04	13.94	15.36	15.67
	3H	21.10	22.42	21.48	22.74	23.11	15.22	16.54	15.60	16.87	17.23
	4H	22.00	23.23	22.40	23.58	23.96	15.86	17.09	16.26	17.44	17.82
	6H	22.66	23.80	23.07	24.17	24.56	16.35	17.49	16.76	17.86	18.25
	8H	22.87	23.95	23.29	24.34	24.74	16.52	17.61	16.95	18.00	18.40
	12H	22.98	24.02	23.41	24.40	24.83	16.64	17.68	17.07	18.06	18.49
4H	2H	18.79	20.02	19.19	20.37	20.75	14.29	15.53	14.69	15.87	16.25
	3H	21.20	22.22	21.61	22.62	23.03	16.14	17.17	16.55	17.57	17.97
	4H	22.13	23.05	22.56	23.47	23.91	16.89	17.81	17.32	18.23	18.67
	6H	22.91	23.71	23.36	24.15	24.61	17.50	18.30	17.96	18.75	19.21
	8H	23.18	23.93	23.64	24.37	24.84	17.72	18.47	18.18	18.91	19.38
	12H	23.35	24.02	23.84	24.50	24.97	17.88	18.55	18.36	19.03	19.50
8H	4H	22.12	22.87	22.59	23.32	23.78	17.27	18.02	17.73	18.46	18.93
	6H	22.93	23.55	23.43	24.04	24.52	18.00	18.62	18.50	19.11	19.59
	8H	23.23	23.79	23.75	24.30	24.79	18.30	18.85	18.81	19.36	19.85
	12H	23.46	23.95	23.97	24.44	25.01	18.54	19.03	19.05	19.52	20.09
12H	4H	22.10	22.77	22.59	23.25	23.72	17.32	17.99	17.81	18.47	18.94
	6H	22.90	23.46	23.42	23.97	24.46	18.09	18.64	18.60	19.15	19.64
	8H	23.24	23.73	23.75	24.22	24.79	18.45	18.93	18.96	19.43	19.99