

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: P1055220

Luminaire Tested: S122R3DR-S485D940-X4F0-XX-UDD-F-W

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055220
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-S485D940-X4F0-XX-UDD-F-W
Description: DEFINE 2, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

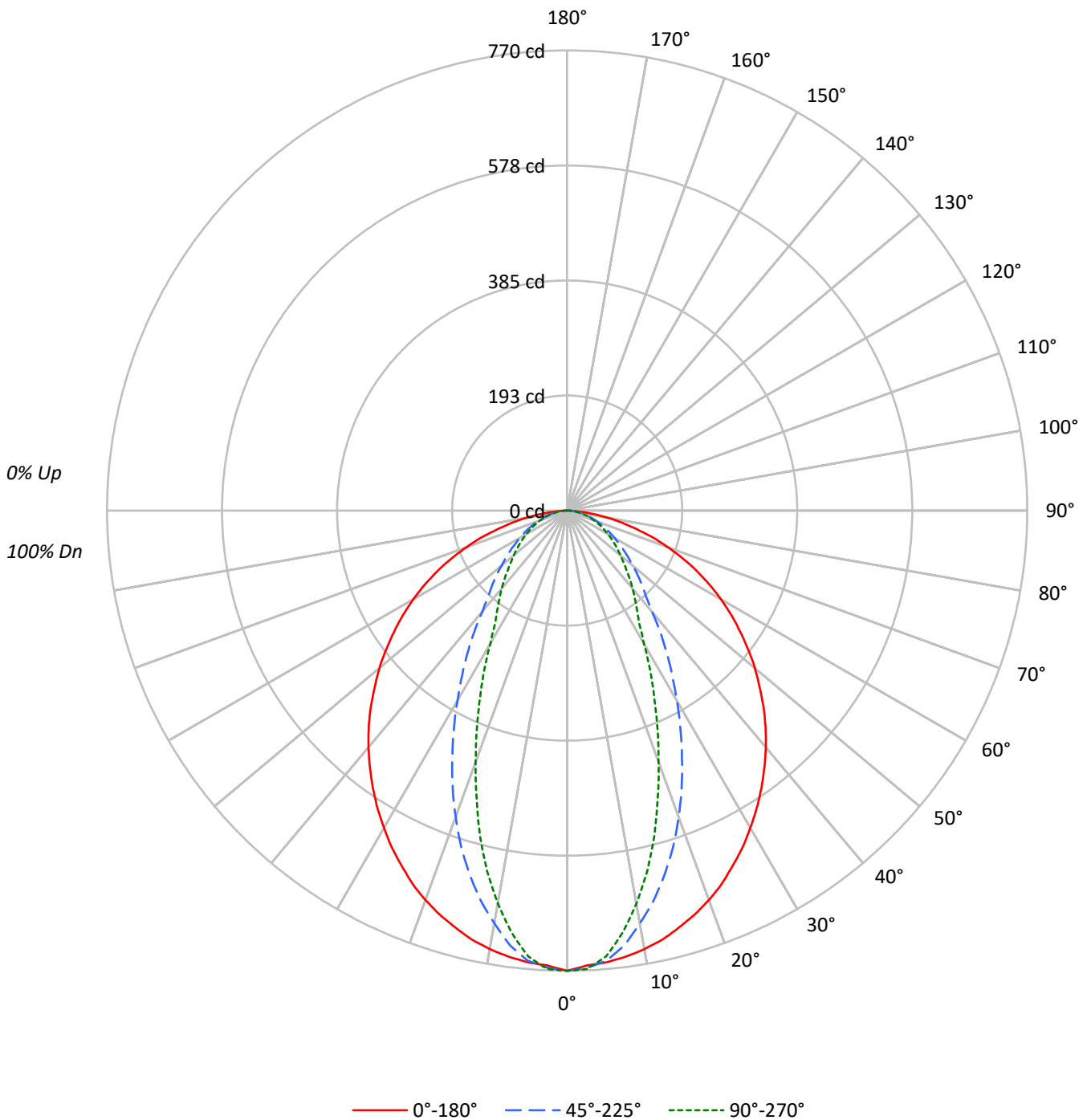
Lumens per Lamp: N/A
Luminaire Lumens: 1164.9 lumens
Efficiency: N/A
Efficacy: 61.0 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.71 / 0.9
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 19.1
Input Voltage (V): 120
Input Current (A_{in}): 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

TEST NUMBER: P1055220

CATALOG NUMBER: S122R3DR-S485D940-X4F0-XX-UDD-F-W

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	106	102	99	108	104	101	97	100	97	94	96	94	92	92	91	89	87
2	102	95	89	84	99	93	87	83	89	85	81	86	82	79	83	80	77	75
3	94	85	78	72	92	83	77	71	80	75	70	78	73	69	75	71	68	66
4	87	76	69	63	85	75	68	62	73	66	61	71	65	61	68	64	60	58
5	81	69	61	55	79	68	61	55	66	60	55	64	59	54	63	58	54	52
6	75	63	55	50	74	63	55	49	61	54	49	59	53	49	58	52	48	46
7	71	58	50	45	69	58	50	45	56	49	44	55	49	44	53	48	44	42
8	66	54	46	41	65	53	46	41	52	45	40	51	45	40	50	44	40	38
9	62	50	43	37	61	49	42	37	48	42	37	47	41	37	46	41	37	35
10	59	47	39	35	58	46	39	34	45	39	34	44	38	34	43	38	34	32

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	14592	14592	14592
5°	14427	14378	14243
10°	14332	13492	12847
15°	14171	12365	11051
20°	13982	10996	9022
25°	13703	9503	7202
30°	13410	8029	5620
35°	13107	6717	4721
40°	12789	5446	4204
45°	12456	4761	3762
50°	12090	4215	3437
55°	11676	3808	3191
60°	11273	3463	2978
65°	10737	3174	2802
70°	9954	2958	2642
75°	8813	2686	2496
80°	7517	2531	2324
85°	5174	2239	2109

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 12456 cd/sqm

TEST NUMBER: P1055220

CATALOG NUMBER: S122R3DR-S485D940-X4F0-XX-UDD-F-W

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	70.6	6.1
10°-20°	178.2	15.3
20°-30°	219.6	18.8
30°-40°	210.6	18.1
40°-50°	181.7	15.6
50°-60°	141.0	12.1
60°-70°	96.5	8.3
70°-80°	52.4	4.5
80°-90°	14.4	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°	468.3	40.2
0°-40°	679.0	58.3
0°-60°	1001.6	86.0
0°-90°	1164.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1164.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	770	770	770	770	770	
5°	759	770	756	746	749	72
15°	722	701	630	579	563	204
25°	656	585	455	371	344	302
35°	567	450	290	216	204	354
45°	465	313	178	147	140	358
55°	354	188	115	100	97	316
65°	240	102	71	64	62	236
75°	120	47	37	35	34	129
85°	24	12	10	10	10	30
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	770.2	770.2	770.2	770.2	770.2
2.5°	761.8	774.7	765.6	765.6	767.6
5°	758.6	769.5	756.0	746.3	748.9
7.5°	752.8	760.5	733.5	712.8	712.2
10°	745.0	745.7	701.3	674.2	667.8
12.5°	735.4	725.1	668.4	627.8	618.2
15°	722.5	700.6	630.4	578.9	563.4
17.5°	709.0	675.5	589.9	525.5	504.2
20°	693.5	645.2	545.4	472.0	447.5
22.5°	676.1	616.3	501.0	420.5	394.7
25°	655.5	585.3	454.6	370.9	344.5
27.5°	635.6	553.8	410.2	327.1	300.1
30°	613.0	519.7	367.0	285.3	256.9
32.5°	590.5	484.9	327.1	245.3	224.1
35°	566.7	449.5	290.4	216.4	204.1
37.5°	542.2	414.7	255.6	197.0	186.1
40°	517.1	379.9	220.2	178.4	170.0
42.5°	491.3	345.8	195.8	162.9	155.2
45°	464.9	313.0	177.7	146.8	140.4
47.5°	436.6	280.1	160.3	133.3	127.5
50°	410.2	248.6	143.0	121.1	116.6
52.5°	381.9	217.7	128.8	110.1	106.3
55°	353.5	188.0	115.3	99.8	96.6
57.5°	325.8	159.7	102.4	90.2	87.6
60°	297.5	137.2	91.4	81.1	78.6
62.5°	268.5	119.1	81.1	72.8	70.2
65°	239.5	102.4	70.8	64.4	62.5
67.5°	209.3	86.3	61.8	56.7	55.4
70°	179.7	72.1	53.4	48.9	47.7
72.5°	150.7	58.6	45.1	41.9	40.6
75°	120.4	47.0	36.7	34.8	34.1
77.5°	94.0	36.7	29.6	28.3	27.7
80°	68.9	27.0	23.2	21.9	21.3
82.5°	45.7	18.7	16.7	16.1	15.5
85°	23.8	11.6	10.3	10.3	9.7
87.5°	7.7	5.2	5.2	5.2	4.5
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	18.92	20.39	19.29	20.70	21.02	13.73	15.20	14.10	15.51	15.83
	3H	21.25	22.57	21.63	22.90	23.26	15.38	16.69	15.76	17.02	17.38
	4H	22.15	23.38	22.55	23.73	24.11	16.01	17.25	16.41	17.60	17.98
	6H	22.81	23.95	23.22	24.32	24.71	16.51	17.65	16.92	18.01	18.41
	8H	23.02	24.10	23.44	24.49	24.89	16.68	17.76	17.10	18.15	18.55
	12H	23.13	24.17	23.56	24.55	24.98	16.79	17.83	17.23	18.21	18.64
4H	2H	18.94	20.17	19.34	20.52	20.90	14.44	15.68	14.84	16.03	16.41
	3H	21.35	22.37	21.76	22.78	23.18	16.29	17.32	16.70	17.72	18.12
	4H	22.28	23.20	22.71	23.62	24.06	17.04	17.96	17.47	18.38	18.82
	6H	23.06	23.86	23.52	24.30	24.76	17.65	18.46	18.11	18.90	19.36
	8H	23.33	24.08	23.79	24.52	24.99	17.87	18.62	18.34	19.07	19.53
	12H	23.50	24.17	23.99	24.65	25.12	18.03	18.70	18.52	19.18	19.65
8H	4H	22.27	23.02	22.74	23.47	23.93	17.42	18.17	17.88	18.61	19.08
	6H	23.08	23.70	23.58	24.19	24.67	18.16	18.77	18.65	19.27	19.74
	8H	23.38	23.94	23.90	24.45	24.94	18.45	19.01	18.97	19.52	20.01
	12H	23.61	24.10	24.12	24.59	25.16	18.70	19.19	19.21	19.68	20.24
12H	4H	22.25	22.92	22.74	23.40	23.87	17.47	18.14	17.96	18.62	19.09
	6H	23.06	23.61	23.57	24.12	24.61	18.24	18.80	18.76	19.31	19.80
	8H	23.39	23.88	23.90	24.37	24.94	18.60	19.09	19.11	19.58	20.15