

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P1055341

Luminaire Tested: S122R3DR-H485D850-X4F0-XX-UDD-FLL-B

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2019
Report Number: P1055341
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-2)
Test Lab: INNOVATION CENTER
Issue Date: 7/25/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S122R3DR-H485D850-X4F0-XX-UDD-FLL-B
Description: DEFINE 2, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 5000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

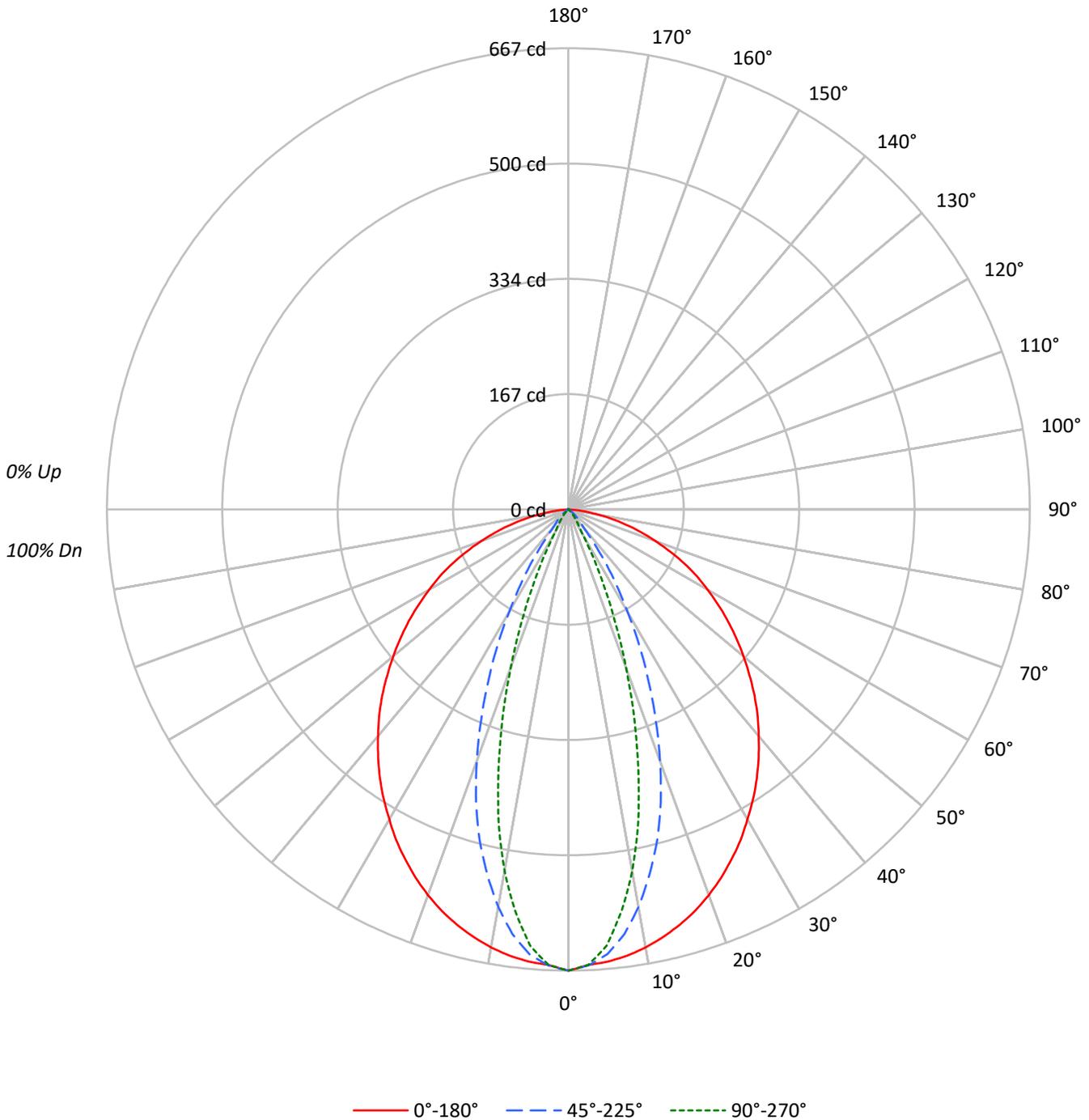
Lumens per Lamp: N/A
Luminaire Lumens: 607.0 lumens
Efficiency: N/A
Efficacy: 35.1 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 0.56 / 0.7
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 17.3
Input Voltage (V): 120
Input Current (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

TEST NUMBER: P1055341

CATALOG NUMBER: S122R3DR-H485D850-X4F0-XX-UDD-FLL-B

Luminous Intensity Polar Plot





TEST NUMBER: P1055341

CATALOG NUMBER: S122R3DR-H485D850-X4F0-XX-UDD-FLL-B

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20
RC	80				70				50				30				10
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102
1	112	109	106	103	110	106	104	101	102	100	98	99	97	95	95	94	92
2	105	99	94	90	103	97	93	89	94	90	87	91	88	85	88	86	83
3	98	91	85	80	96	89	84	79	86	82	78	84	80	77	82	78	75
4	92	83	77	72	90	82	76	71	80	75	70	78	73	70	76	72	69
5	87	77	70	65	85	76	70	65	74	69	64	72	68	64	71	66	63
6	82	72	65	60	80	71	64	59	69	63	59	68	62	59	66	62	58
7	77	67	60	55	76	66	59	55	65	59	55	63	58	54	62	57	54
8	73	62	56	51	72	62	55	51	61	55	51	60	54	50	59	54	50
9	70	59	52	48	68	58	52	47	57	51	47	56	51	47	55	50	47
10	66	55	49	45	65	55	49	44	54	48	44	53	48	44	52	47	44

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	12639	12639	12639
5°	12484	12280	12046
10°	12378	11227	10223
15°	12198	9717	7655
20°	11966	7807	4901
25°	11669	5724	2517
30°	11323	3741	823
35°	10979	2075	479
40°	10583	833	265
45°	10190	555	102
50°	9741	315	44
55°	9295	152	26
60°	8802	57	0
65°	8285	36	0
70°	7434	44	0
75°	6398	59	0
80°	4855	0	0
85°	2000	174	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 10190 cd/sqm



TEST NUMBER: P1055341

CATALOG NUMBER: S122R3DR-H485D850-X4F0-XX-UDD-FLL-B

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	59.8	9.9
10°-20°	139.0	22.9
20°-30°	141.1	23.2
30°-40°	105.9	17.4
40°-50°	74.1	12.2
50°-60°	45.4	7.5
60°-70°	27.0	4.5
70°-80°	12.5	2.1
80°-90°	2.3	0.4
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°	339.9	56.0
0°-40°	445.7	73.4
0°-60°	565.2	93.1
0°-90°	607.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	607.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	667	667	667	667	667	
5°	656	662	646	633	633	62
15°	622	588	495	420	390	175
25°	558	460	274	156	120	257
35°	475	309	90	27	21	297
45°	380	163	21	6	4	293
55°	281	50	5	2	1	252
65°	185	15	1	1	0	182
75°	87	2	1	1	0	93
85°	9	0	1	1	0	16
90°	0	0	0	0	0	



TEST NUMBER: P1055341

CATALOG NUMBER: S122R3DR-H485D850-X4F0-XX-UDD-FLL-B

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	667.1	667.1	667.1	667.1	667.1
2.5°	659.5	669.4	660.2	658.7	659.5
5°	656.4	662.5	645.7	633.4	633.4
7.5°	651.0	651.0	619.6	594.3	586.6
10°	643.4	634.9	583.6	542.9	531.4
12.5°	633.4	613.5	541.4	483.9	465.5
15°	621.9	588.2	495.4	419.5	390.3
17.5°	608.9	559.8	444.0	349.7	315.9
20°	593.5	529.1	387.2	278.4	243.1
22.5°	576.7	495.4	329.7	214.7	177.1
25°	558.2	460.1	273.8	156.4	120.4
27.5°	539.1	423.3	222.4	107.4	73.6
30°	517.6	384.9	171.0	63.6	37.6
32.5°	496.9	348.1	128.1	34.5	27.6
35°	474.7	309.0	89.7	26.8	20.7
37.5°	451.7	272.2	55.2	19.9	15.3
40°	427.9	234.6	33.7	14.6	10.7
42.5°	404.9	199.4	26.8	10.0	6.9
45°	380.3	163.3	20.7	6.1	3.8
47.5°	355.0	130.4	15.3	3.8	2.3
50°	330.5	101.2	10.7	2.3	1.5
52.5°	306.0	74.4	6.9	1.5	0.8
55°	281.4	49.8	4.6	1.5	0.8
57.5°	256.9	35.3	3.1	0.8	0.8
60°	232.3	27.6	1.5	0.8	0.0
62.5°	209.3	21.5	1.5	0.8	0.8
65°	184.8	14.6	0.8	0.8	0.0
67.5°	158.7	9.2	0.8	0.8	0.0
70°	134.2	5.4	0.8	0.8	0.0
72.5°	110.4	3.1	0.8	0.8	0.0
75°	87.4	1.5	0.8	0.8	0.0
77.5°	65.2	0.8	0.0	0.8	0.0
80°	44.5	0.0	0.0	0.8	0.0
82.5°	26.1	0.0	0.0	0.8	0.0
85°	9.2	0.0	0.8	0.8	0.0
87.5°	0.0	0.0	0.8	0.8	0.0
90°	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P1055341

CATALOG NUMBER: S122R3DR-H485D850-X4F0-XX-UDD-FLL-B

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	15.03	16.29	15.39	16.60	16.91	0.00	0.00	0.00	0.00	0.00
	3H	18.77	19.88	19.15	20.22	20.58	0.00	0.00	0.00	0.00	0.00
	4H	20.08	21.12	20.48	21.47	21.85	0.00	0.00	0.00	0.00	0.00
	6H	20.93	21.89	21.35	22.26	22.65	0.00	0.00	0.00	0.00	0.00
	8H	21.15	22.05	21.58	22.44	22.85	0.00	0.00	0.00	0.00	0.00
	12H	21.21	22.07	21.64	22.46	22.89	0.00	0.00	0.00	0.00	0.00
4H	2H	14.78	15.82	15.18	16.17	16.56	0.00	0.00	0.00	0.00	0.00
	3H	18.52	19.37	18.93	19.78	20.18	0.00	0.00	0.00	0.00	0.00
	4H	19.82	20.58	20.25	21.00	21.44	0.00	0.00	0.00	0.00	0.00
	6H	20.74	21.39	21.20	21.84	22.31	0.00	0.00	0.00	0.00	0.00
	8H	20.99	21.61	21.47	22.05	22.53	0.00	0.00	0.00	0.00	0.00
	12H	21.10	21.63	21.58	22.12	22.59	0.00	0.00	0.00	0.00	0.00
8H	4H	19.67	20.28	20.14	20.73	21.20	0.00	0.00	0.00	0.00	0.00
	6H	20.57	21.07	21.08	21.57	22.05	0.00	0.00	0.00	0.00	0.00
	8H	20.83	21.28	21.36	21.79	22.28	0.00	0.00	0.00	0.00	0.00
	12H	20.95	21.34	21.47	21.83	22.41	0.00	0.00	0.00	0.00	0.00
12H	4H	19.62	20.16	20.11	20.64	21.12	0.00	0.00	0.00	0.00	0.00
	6H	20.51	20.95	21.03	21.47	21.96	0.00	0.00	0.00	0.00	0.00
	8H	20.79	21.18	21.30	21.67	22.24	0.00	0.00	0.00	0.00	0.00