

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: P1055335

Luminaire Tested: S122R3DR-H485D835-X4F0-XX-UDD-FLL-B

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1055335  
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-H485D835-X4F0-XX-UDD-FLL-B  
Description: DEFINE 2, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 3500K CCT, 80 CRI LEDS  
Ballast/Driver: -

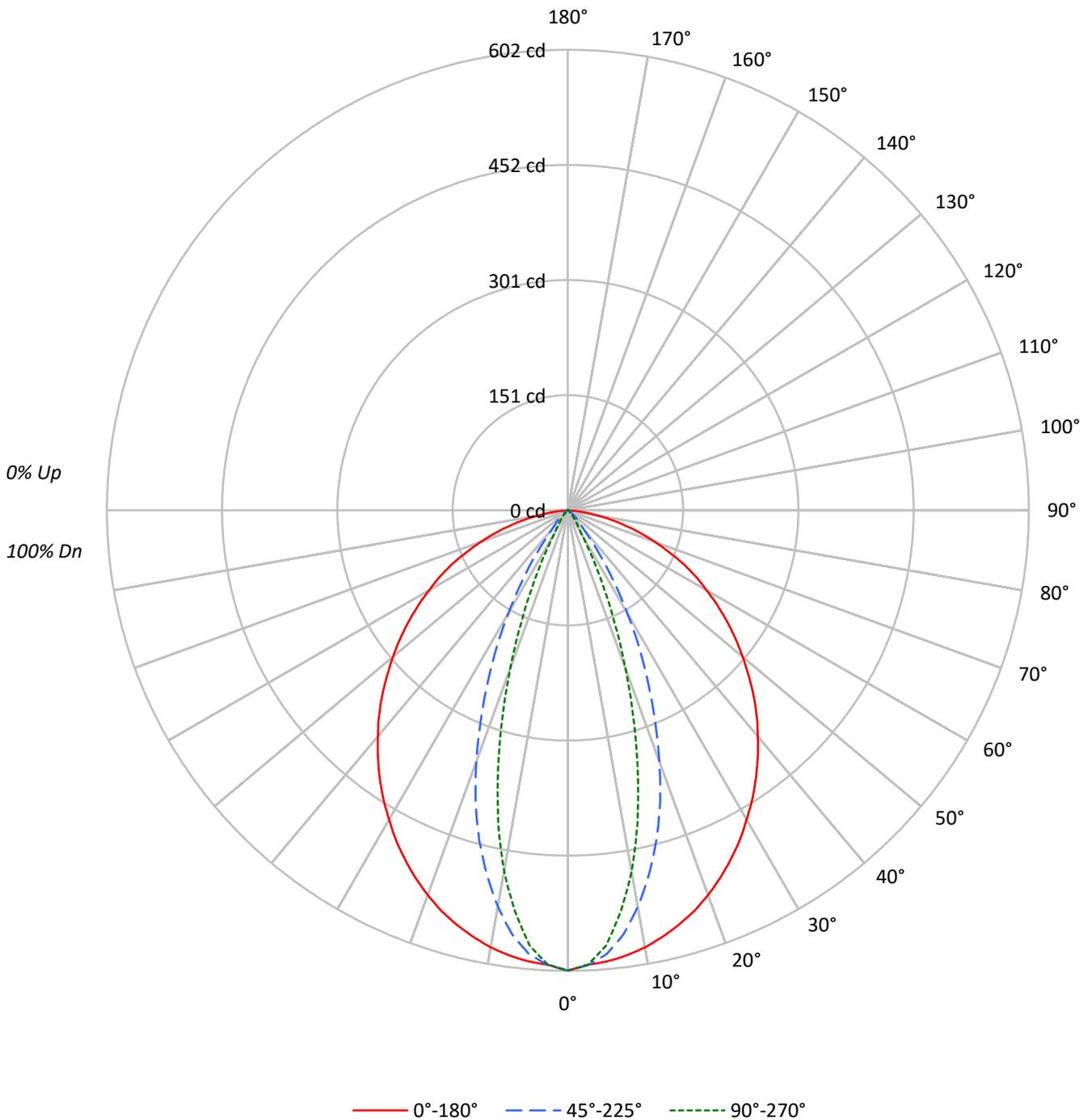
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 547.3 lumens  
Efficiency: N/A  
Efficacy: 31.6 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: P1055335

CATALOG NUMBER: S122R3DR-H485D835-X4F0-XX-UDD-FLL-B

### Luminous Intensity Polar Plot





TEST NUMBER: P1055335

CATALOG NUMBER: S122R3DR-H485D835-X4F0-XX-UDD-FLL-B

**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	112	109	106	103	110	106	104	101	102	100	98	99	97	95	95	94	92	91
2	105	99	94	90	103	97	93	89	94	90	87	91	88	85	88	86	83	81
3	98	91	85	80	96	89	84	79	86	82	78	84	80	77	82	78	75	74
4	92	83	77	72	90	82	76	71	80	75	70	78	73	70	76	72	69	67
5	87	77	70	65	85	76	70	65	74	69	64	72	68	64	71	66	63	61
6	82	72	65	60	80	71	64	59	69	63	59	68	62	59	66	62	58	56
7	77	67	60	55	76	66	59	55	65	59	55	63	58	54	62	57	54	52
8	73	62	56	51	72	62	55	51	61	55	51	60	54	50	59	54	50	49
9	70	59	52	48	68	58	52	47	57	51	47	56	51	47	55	50	47	45
10	66	55	49	45	65	55	49	44	54	48	44	53	48	44	52	47	44	43

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

	0°	45°	90°
0°	11398	11398	11398
5°	11257	11072	10861
10°	11160	10123	9219
15°	11000	8762	6904
20°	10791	7040	4419
25°	10523	5159	2270
30°	10210	3373	742
35°	9899	1871	433
40°	9542	752	240
45°	9190	501	94
50°	8783	286	41
55°	8383	135	23
60°	7938	53	0
65°	7469	31	0
70°	6703	39	0
75°	5768	51	0
80°	4375	0	0
85°	1804	152	0

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 9190 cd/sqm



TEST NUMBER: P1055335

CATALOG NUMBER: S122R3DR-H485D835-X4F0-XX-UDD-FLL-B

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	53.9	9.9
10°-20°	125.3	22.9
20°-30°	127.2	23.2
30°-40°	95.5	17.4
40°-50°	66.8	12.2
50°-60°	40.9	7.5
60°-70°	24.4	4.5
70°-80°	11.2	2.1
80°-90°	2.0	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°	306.5	56.0
0°-40°	401.9	73.4
0°-60°	509.7	93.1
0°-90°	547.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	547.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	602	602	602	602	602	
5°	592	597	582	571	571	56
15°	561	530	447	378	352	158
25°	503	415	247	141	109	232
35°	428	279	81	24	19	268
45°	343	147	19	6	4	264
55°	254	45	4	1	1	227
65°	167	13	1	1	0	164
75°	79	1	1	1	0	84
85°	8	0	1	1	0	14
90°	0	0	0	0	0	



TEST NUMBER: P1055335

CATALOG NUMBER: S122R3DR-H485D835-X4F0-XX-UDD-FLL-B

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	601.6	601.6	601.6	601.6	601.6
2.5°	594.7	603.6	595.3	594.0	594.7
5°	591.9	597.4	582.2	571.1	571.1
7.5°	587.0	587.0	558.7	535.9	529.0
10°	580.1	572.5	526.2	489.6	479.2
12.5°	571.1	553.2	488.2	436.3	419.7
15°	560.8	530.3	446.7	378.2	352.0
17.5°	549.0	504.8	400.4	315.3	284.9
20°	535.2	477.1	349.2	251.0	219.2
22.5°	520.0	446.7	297.3	193.6	159.7
25°	503.4	414.9	246.8	141.1	108.6
27.5°	486.1	381.7	200.5	96.8	66.4
30°	466.7	347.1	154.2	57.4	33.9
32.5°	448.1	313.9	115.5	31.1	24.9
35°	428.0	278.7	80.9	24.2	18.7
37.5°	407.3	245.5	49.8	18.0	13.8
40°	385.8	211.6	30.4	13.1	9.7
42.5°	365.1	179.8	24.2	9.0	6.2
45°	343.0	147.3	18.7	5.5	3.5
47.5°	320.1	117.5	13.8	3.5	2.1
50°	298.0	91.3	9.7	2.1	1.4
52.5°	275.9	67.1	6.2	1.4	0.7
55°	253.8	44.9	4.1	1.4	0.7
57.5°	231.6	31.8	2.8	0.7	0.7
60°	209.5	24.9	1.4	0.7	0.0
62.5°	188.8	19.4	1.4	0.7	0.7
65°	166.6	13.1	0.7	0.7	0.0
67.5°	143.1	8.3	0.7	0.7	0.0
70°	121.0	4.8	0.7	0.7	0.0
72.5°	99.6	2.8	0.7	0.7	0.0
75°	78.8	1.4	0.7	0.7	0.0
77.5°	58.8	0.7	0.0	0.7	0.0
80°	40.1	0.0	0.0	0.7	0.0
82.5°	23.5	0.0	0.0	0.7	0.0
85°	8.3	0.0	0.7	0.7	0.0
87.5°	0.0	0.0	0.7	0.7	0.0
90°	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P1055335  
 CATALOG NUMBER: S122R3DR-H485D835-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	14.66	15.92	15.03	16.24	16.55	0.00	0.00	0.00	0.00	0.00
	3H	18.41	19.52	18.79	19.85	20.22	0.00	0.00	0.00	0.00	0.00
	4H	19.72	20.76	20.12	21.11	21.49	0.00	0.00	0.00	0.00	0.00
	6H	20.57	21.53	20.99	21.90	22.29	0.00	0.00	0.00	0.00	0.00
	8H	20.79	21.69	21.22	22.08	22.49	0.00	0.00	0.00	0.00	0.00
	12H	20.85	21.71	21.28	22.10	22.53	0.00	0.00	0.00	0.00	0.00
4H	2H	14.42	15.46	14.82	15.81	16.19	0.00	0.00	0.00	0.00	0.00
	3H	18.16	19.01	18.57	19.42	19.82	0.00	0.00	0.00	0.00	0.00
	4H	19.46	20.22	19.89	20.64	21.08	0.00	0.00	0.00	0.00	0.00
	6H	20.38	21.03	20.84	21.48	21.95	0.00	0.00	0.00	0.00	0.00
	8H	20.63	21.25	21.10	21.69	22.17	0.00	0.00	0.00	0.00	0.00
	12H	20.74	21.27	21.22	21.76	22.23	0.00	0.00	0.00	0.00	0.00
8H	4H	19.31	19.92	19.78	20.37	20.84	0.00	0.00	0.00	0.00	0.00
	6H	20.21	20.71	20.72	21.21	21.69	0.00	0.00	0.00	0.00	0.00
	8H	20.47	20.91	20.99	21.43	21.92	0.00	0.00	0.00	0.00	0.00
	12H	20.59	20.98	21.10	21.47	22.05	0.00	0.00	0.00	0.00	0.00
12H	4H	19.26	19.80	19.75	20.28	20.76	0.00	0.00	0.00	0.00	0.00
	6H	20.15	20.59	20.67	21.11	21.60	0.00	0.00	0.00	0.00	0.00
	8H	20.43	20.81	20.94	21.31	21.88	0.00	0.00	0.00	0.00	0.00