

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: P1055201

Luminaire Tested: S122R3DR-S485D835-X4F0-XX-UDD-F-S

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055201
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-3)
Test Lab: INNOVATION CENTER
Issue Date: 7/25/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S122R3DR-S485D835-X4F0-XX-UDD-F-S
Description: DEFINE 2, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

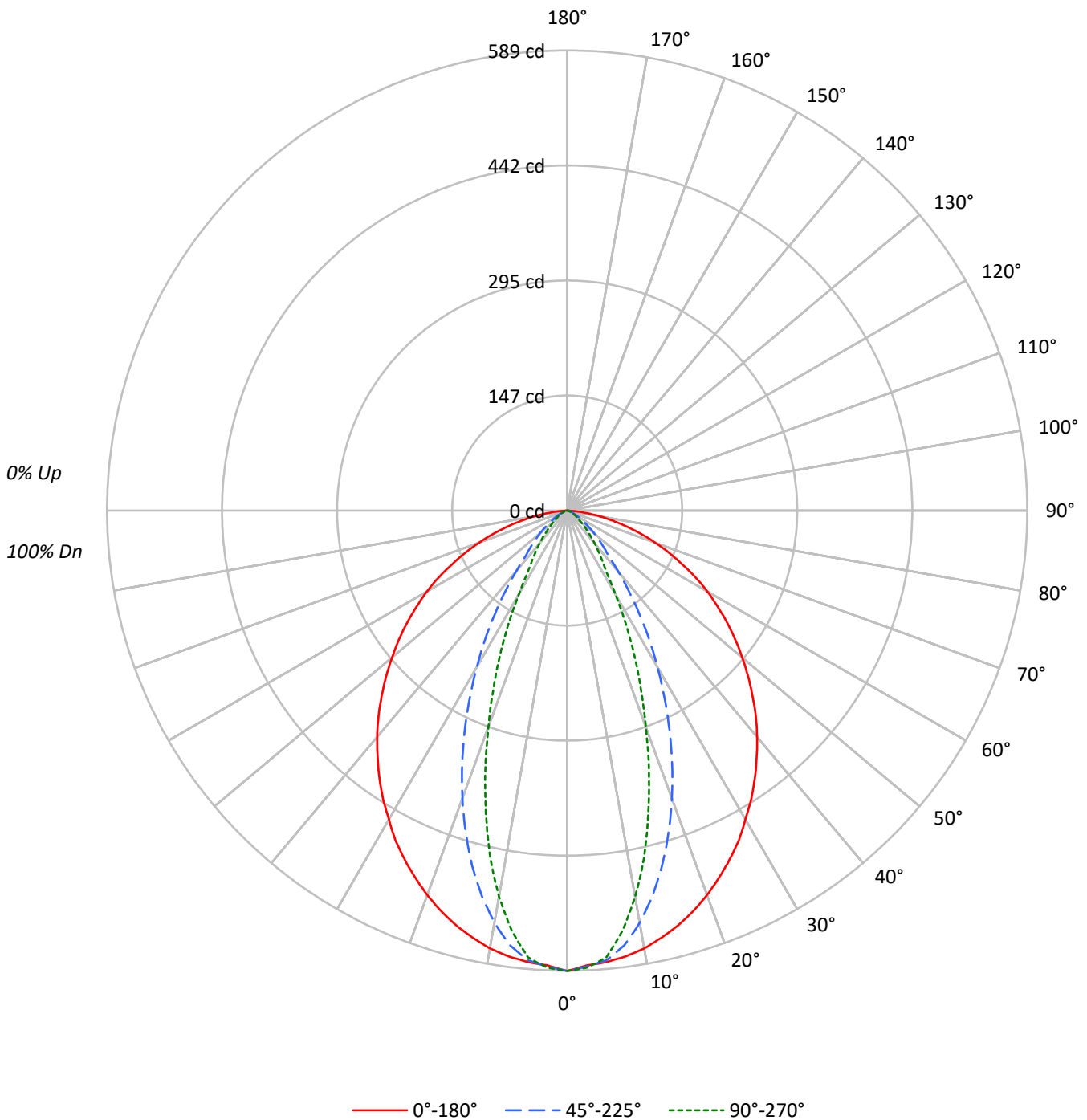
Lumens per Lamp: N/A
Luminaire Lumens: 675.3 lumens
Efficiency: N/A
Efficacy: 35.4 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 0.64 / 0.81
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 19.1
Input Voltage (V): 120
Input Current (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: P1055201

CATALOG NUMBER: S122R3DR-S485D835-X4F0-XX-UDD-F-S

Luminous Intensity Polar Plot





TEST NUMBER: P1055201

CATALOG NUMBER: S122R3DR-S485D835-X4F0-XX-UDD-F-S

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	108	105	102	109	106	103	100	102	99	97	98	96	94	94	93	92	90
2	104	98	93	88	102	96	91	87	93	89	85	90	86	83	87	84	82	80
3	97	89	83	78	95	88	82	77	85	80	76	82	78	74	80	76	73	71
4	91	81	74	69	89	80	74	69	78	72	68	76	71	67	74	70	66	64
5	85	75	67	62	83	74	67	62	72	66	61	70	65	61	68	64	60	58
6	80	69	62	56	78	68	61	56	66	60	56	65	59	55	63	59	55	53
7	75	64	57	52	74	63	56	51	62	56	51	60	55	51	59	54	50	49
8	71	59	52	47	69	59	52	47	58	51	47	56	51	47	55	50	47	45
9	67	56	49	44	66	55	48	44	54	48	44	53	47	43	52	47	43	42
10	63	52	45	41	62	52	45	41	51	45	41	50	44	40	49	44	40	39

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11165	11165	11165
5°	11029	10987	10918
10°	10946	10308	9656
15°	10780	9221	7875
20°	10557	7905	5940
25°	10295	6476	4242
30°	9985	5056	2702
35°	9686	3708	1804
40°	9359	2500	1358
45°	8997	1760	967
50°	8621	1341	681
55°	8254	931	502
60°	7855	629	409
65°	7285	453	323
70°	6642	360	283
75°	5761	315	212
80°	4571	240	240
85°	2522	304	152

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 8997 cd/sqm



TEST NUMBER: P1055201

CATALOG NUMBER: S122R3DR-S485D835-X4F0-XX-UDD-F-S

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	53.9	8.0
10°-20°	132.2	19.6
20°-30°	151.1	22.4
30°-40°	128.1	19.0
40°-50°	95.6	14.2
50°-60°	61.8	9.1
60°-70°	34.4	5.1
70°-80°	15.1	2.2
80°-90°	3.1	0.5
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°	337.2	49.9
0°-40°	465.3	68.9
0°-60°	622.6	92.2
0°-90°	675.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	675.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	589	589	589	589	589	
5°	580	587	578	572	574	55
15°	550	536	470	420	402	155
25°	492	435	310	227	203	227
35°	419	316	160	87	78	262
45°	336	199	66	43	36	259
55°	250	95	28	17	15	223
65°	162	35	10	8	7	162
75°	79	7	4	4	3	84
85°	12	1	1	1	1	17
90°	0	0	0	0	0	



TEST NUMBER: P1055201

CATALOG NUMBER: S122R3DR-S485D835-X4F0-XX-UDD-F-S

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	589.3	589.3	589.3	589.3	589.3
2.5°	582.8	591.4	584.2	584.2	585.7
5°	579.9	587.1	577.7	571.9	574.1
7.5°	575.5	580.6	561.1	543.8	542.3
10°	569.0	571.2	535.8	509.1	501.9
12.5°	559.7	554.6	504.8	467.2	455.0
15°	549.6	535.8	470.1	420.3	401.5
17.5°	537.3	512.7	431.8	371.2	348.1
20°	523.6	488.9	392.1	319.9	294.6
22.5°	508.4	462.2	351.0	271.5	246.3
25°	492.5	434.7	309.8	226.8	202.9
27.5°	475.9	405.8	269.4	186.3	160.3
30°	456.4	376.2	231.1	147.3	123.5
32.5°	438.3	345.2	195.7	114.1	93.9
35°	418.8	315.6	160.3	87.4	78.0
37.5°	398.6	286.0	129.3	73.7	65.7
40°	378.4	256.4	101.1	62.1	54.9
42.5°	357.5	227.5	78.0	52.0	44.8
45°	335.8	199.3	65.7	42.6	36.1
47.5°	314.1	171.1	54.9	33.9	28.9
50°	292.5	144.4	45.5	26.7	23.1
52.5°	271.5	119.2	36.1	21.7	18.8
55°	249.9	94.6	28.2	17.3	15.2
57.5°	228.2	73.7	21.7	14.4	13.0
60°	207.3	55.6	16.6	11.6	10.8
62.5°	185.6	44.8	13.0	9.4	8.7
65°	162.5	34.7	10.1	7.9	7.2
67.5°	141.5	25.3	7.9	6.5	5.8
70°	119.9	17.3	6.5	5.8	5.1
72.5°	98.9	10.8	5.1	4.3	4.3
75°	78.7	7.2	4.3	3.6	2.9
77.5°	59.9	4.3	2.9	2.9	2.2
80°	41.9	2.9	2.2	2.2	2.2
82.5°	26.0	2.2	1.4	1.4	1.4
85°	11.6	0.7	1.4	0.7	0.7
87.5°	2.2	0.7	0.7	0.7	0.7
90°	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P1055201
 CATALOG NUMBER: S122R3DR-S485D835-X4F0-XX-UDD-F-S

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	16.64	17.96	17.00	18.27	18.58	2.93	4.25	3.29	4.56	4.88
	3H	19.10	20.28	19.48	20.61	20.97	3.79	4.96	4.17	5.29	5.66
	4H	20.06	21.15	20.46	21.50	21.89	4.06	5.15	4.47	5.51	5.89
	6H	20.75	21.75	21.16	22.12	22.51	4.26	5.27	4.68	5.64	6.03
	8H	20.94	21.89	21.37	22.28	22.69	4.33	5.28	4.76	5.68	6.08
	12H	21.02	21.93	21.46	22.32	22.75	4.35	5.26	4.79	5.65	6.08
4H	2H	16.42	17.51	16.82	17.86	18.25	3.50	4.60	3.91	4.95	5.33
	3H	18.90	19.80	19.32	20.20	20.61	4.54	5.44	4.96	5.84	6.25
	4H	19.85	20.65	20.28	21.07	21.51	4.91	5.71	5.35	6.13	6.57
	6H	20.60	21.29	21.06	21.74	22.20	5.21	5.90	5.67	6.35	6.81
	8H	20.84	21.49	21.31	21.94	22.41	5.31	5.95	5.78	6.40	6.87
	12H	20.97	21.54	21.46	22.03	22.50	5.35	5.91	5.83	6.40	6.87
8H	4H	19.71	20.36	20.18	20.81	21.28	5.28	5.93	5.75	6.37	6.84
	6H	20.45	20.98	20.95	21.47	21.95	5.65	6.18	6.15	6.67	7.15
	8H	20.70	21.17	21.22	21.68	22.18	5.78	6.26	6.31	6.77	7.26
	12H	20.85	21.26	21.36	21.76	22.33	5.86	6.27	6.38	6.77	7.34
12H	4H	19.67	20.24	20.16	20.72	21.19	5.40	5.97	5.89	6.46	6.93
	6H	20.39	20.86	20.91	21.38	21.87	5.77	6.24	6.29	6.76	7.25
	8H	20.66	21.07	21.17	21.57	22.14	5.94	6.36	6.46	6.85	7.42