

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: P1055222

Luminaire Tested: S122R3DR-S485D950-X4F0-XX-UDD-F-S

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055222
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-S485D950-X4F0-XX-UDD-F-S
Description: DEFINE 2, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 5000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

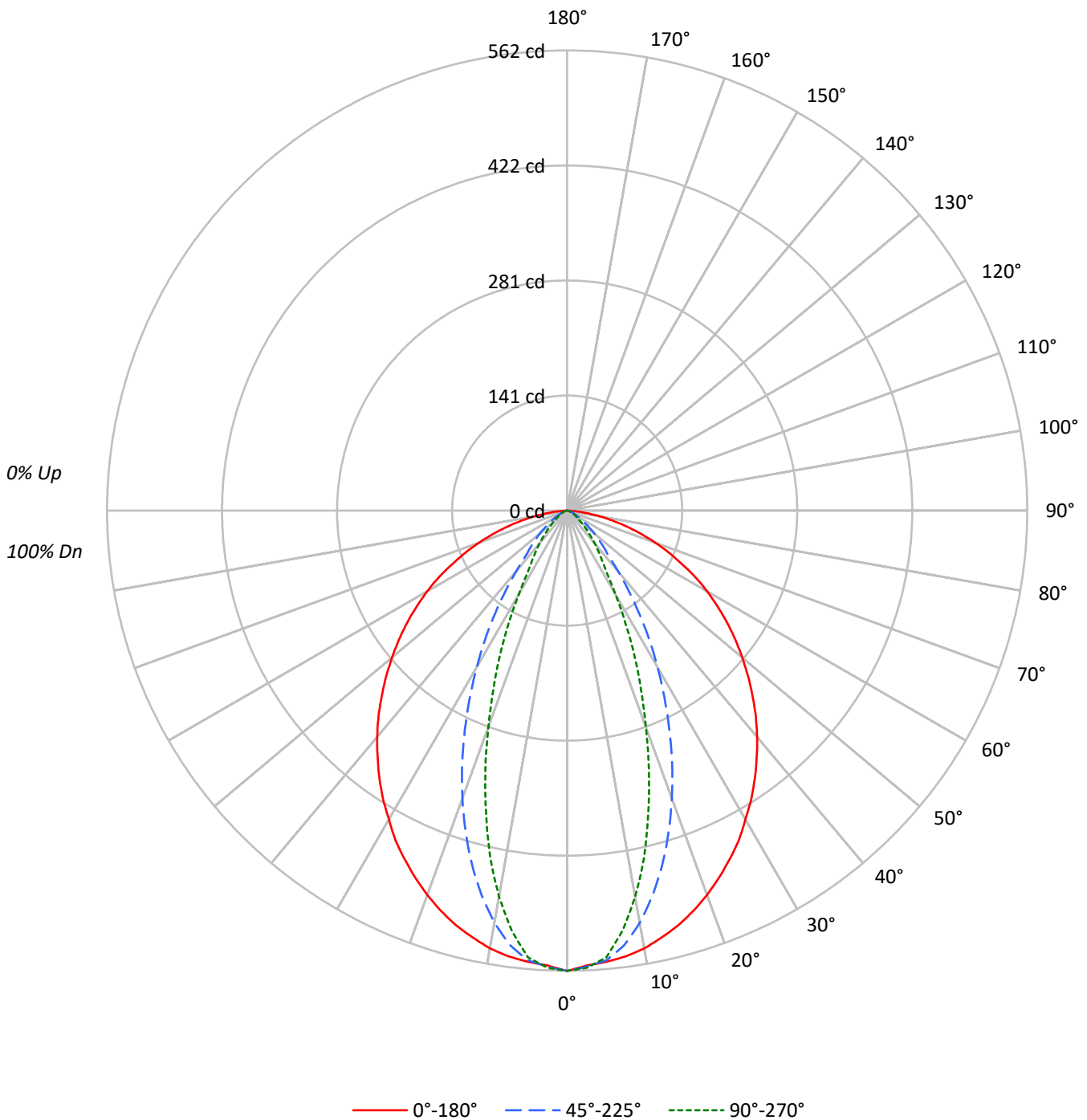
Lumens per Lamp: N/A
Luminaire Lumens: 644.3 lumens
Efficiency: N/A
Efficacy: 33.7 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 0.64 / 0.81
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 19.1
Input Voltage (V): 120
Input Current (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: P1055222

CATALOG NUMBER: S122R3DR-S485D950-X4F0-XX-UDD-F-S

Luminous Intensity Polar Plot





TEST NUMBER: P105222

CATALOG NUMBER: S122R3DR-S485D950-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°	10651	10651	10651
5°	10521	10481	10416
10°	10444	9835	9211
15°	10284	8797	7512
20°	10071	7543	5667
25°	9821	6177	4047
30°	9525	4824	2577
35°	9242	3536	1721
40°	8928	2384	1296
45°	8582	1680	922
50°	8223	1279	648
55°	7875	889	479
60°	7491	599	390
65°	6949	430	309
70°	6337	343	266
75°	5497	300	205
80°	4364	229	229
85°	2391	304	152

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 8582 cd/sqm



TEST NUMBER: P105222

CATALOG NUMBER: S122R3DR-S485D950-X4F0-XX-UDD-F-S

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	51.4	8.0
10°-20°	126.2	19.6
20°-30°	144.1	22.4
30°-40°	122.2	19.0
40°-50°	91.2	14.2
50°-60°	58.9	9.1
60°-70°	32.9	5.1
70°-80°	14.4	2.2
80°-90°	3.0	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°	321.7	49.9
0°-40°	443.9	68.9
0°-60°	594.0	92.2
0°-90°	644.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	644.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	562	562	562	562	562	
5°	553	560	551	546	548	53
15°	524	511	448	401	383	148
25°	470	415	296	216	194	216
35°	400	301	153	83	74	250
45°	320	190	63	41	34	247
55°	238	90	27	16	14	213
65°	155	33	10	8	7	154
75°	75	7	4	3	3	80
85°	11	1	1	1	1	16
90°	0	0	0	0	0	



TEST NUMBER: P1055222

CATALOG NUMBER: S122R3DR-S485D950-X4F0-XX-UDD-F-S

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	562.2	562.2	562.2	562.2	562.2
2.5°	556.0	564.2	557.3	557.3	558.7
5°	553.2	560.1	551.1	545.6	547.7
7.5°	549.1	553.9	535.3	518.8	517.4
10°	542.9	544.9	511.2	485.7	478.8
12.5°	533.9	529.1	481.6	445.7	434.0
15°	524.3	511.2	448.5	401.0	383.0
17.5°	512.6	489.1	412.0	354.1	332.1
20°	499.5	466.4	374.1	305.2	281.1
22.5°	485.0	440.9	334.8	259.0	234.9
25°	469.8	414.7	295.5	216.3	193.6
27.5°	454.0	387.2	257.0	177.7	152.9
30°	435.4	358.9	220.5	140.5	117.8
32.5°	418.2	329.3	186.7	108.9	89.6
35°	399.6	301.1	152.9	83.4	74.4
37.5°	380.3	272.8	123.3	70.3	62.7
40°	361.0	244.6	96.4	59.2	52.4
42.5°	341.0	217.0	74.4	49.6	42.7
45°	320.3	190.1	62.7	40.6	34.4
47.5°	299.7	163.3	52.4	32.4	27.6
50°	279.0	137.8	43.4	25.5	22.0
52.5°	259.0	113.7	34.4	20.7	17.9
55°	238.4	90.2	26.9	16.5	14.5
57.5°	217.7	70.3	20.7	13.8	12.4
60°	197.7	53.0	15.8	11.0	10.3
62.5°	177.1	42.7	12.4	9.0	8.3
65°	155.0	33.1	9.6	7.6	6.9
67.5°	135.0	24.1	7.6	6.2	5.5
70°	114.4	16.5	6.2	5.5	4.8
72.5°	94.4	10.3	4.8	4.1	4.1
75°	75.1	6.9	4.1	3.4	2.8
77.5°	57.2	4.1	2.8	2.8	2.1
80°	40.0	2.8	2.1	2.1	2.1
82.5°	24.8	2.1	1.4	1.4	1.4
85°	11.0	0.7	1.4	0.7	0.7
87.5°	2.1	0.7	0.7	0.7	0.7
90°	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P1055222
 CATALOG NUMBER: S122R3DR-S485D950-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	16.47	17.79	16.84	18.10	18.42	2.79	4.11	3.15	4.42	4.74
	3H	18.94	20.11	19.32	20.44	20.81	3.63	4.80	4.01	5.13	5.50
	4H	19.90	20.99	20.30	21.34	21.72	3.91	5.00	4.31	5.35	5.73
	6H	20.58	21.59	21.00	21.96	22.35	4.11	5.11	4.52	5.48	5.87
	8H	20.78	21.73	21.21	22.12	22.53	4.18	5.14	4.61	5.53	5.93
	12H	20.86	21.77	21.29	22.15	22.58	4.21	5.12	4.64	5.50	5.93
4H	2H	16.26	17.35	16.66	17.70	18.08	3.35	4.44	3.76	4.80	5.18
	3H	18.74	19.63	19.15	20.04	20.44	4.38	5.27	4.79	5.68	6.08
	4H	19.68	20.48	20.12	20.90	21.35	4.74	5.54	5.18	5.96	6.41
	6H	20.44	21.13	20.90	21.58	22.04	5.05	5.74	5.51	6.19	6.65
	8H	20.68	21.33	21.15	21.77	22.24	5.15	5.80	5.62	6.24	6.71
	12H	20.81	21.38	21.30	21.86	22.34	5.20	5.77	5.69	6.25	6.73
8H	4H	19.55	20.19	20.02	20.64	21.11	5.12	5.76	5.59	6.21	6.68
	6H	20.29	20.81	20.79	21.31	21.79	5.49	6.02	5.99	6.51	6.99
	8H	20.54	21.01	21.06	21.52	22.01	5.64	6.11	6.16	6.62	7.11
	12H	20.69	21.10	21.20	21.59	22.17	5.72	6.14	6.24	6.63	7.20
12H	4H	19.51	20.07	19.99	20.56	21.03	5.24	5.81	5.73	6.29	6.77
	6H	20.23	20.70	20.75	21.22	21.71	5.61	6.08	6.13	6.60	7.09
	8H	20.49	20.91	21.01	21.40	21.97	5.80	6.21	6.31	6.71	7.28