

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: P1055279

Luminaire Tested: S122R3DR-H1005D830-X4F0-XX-UDD-F-S

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055279
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-H1005D830-X4F0-XX-UDD-F-S
Description: DEFINE 2, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

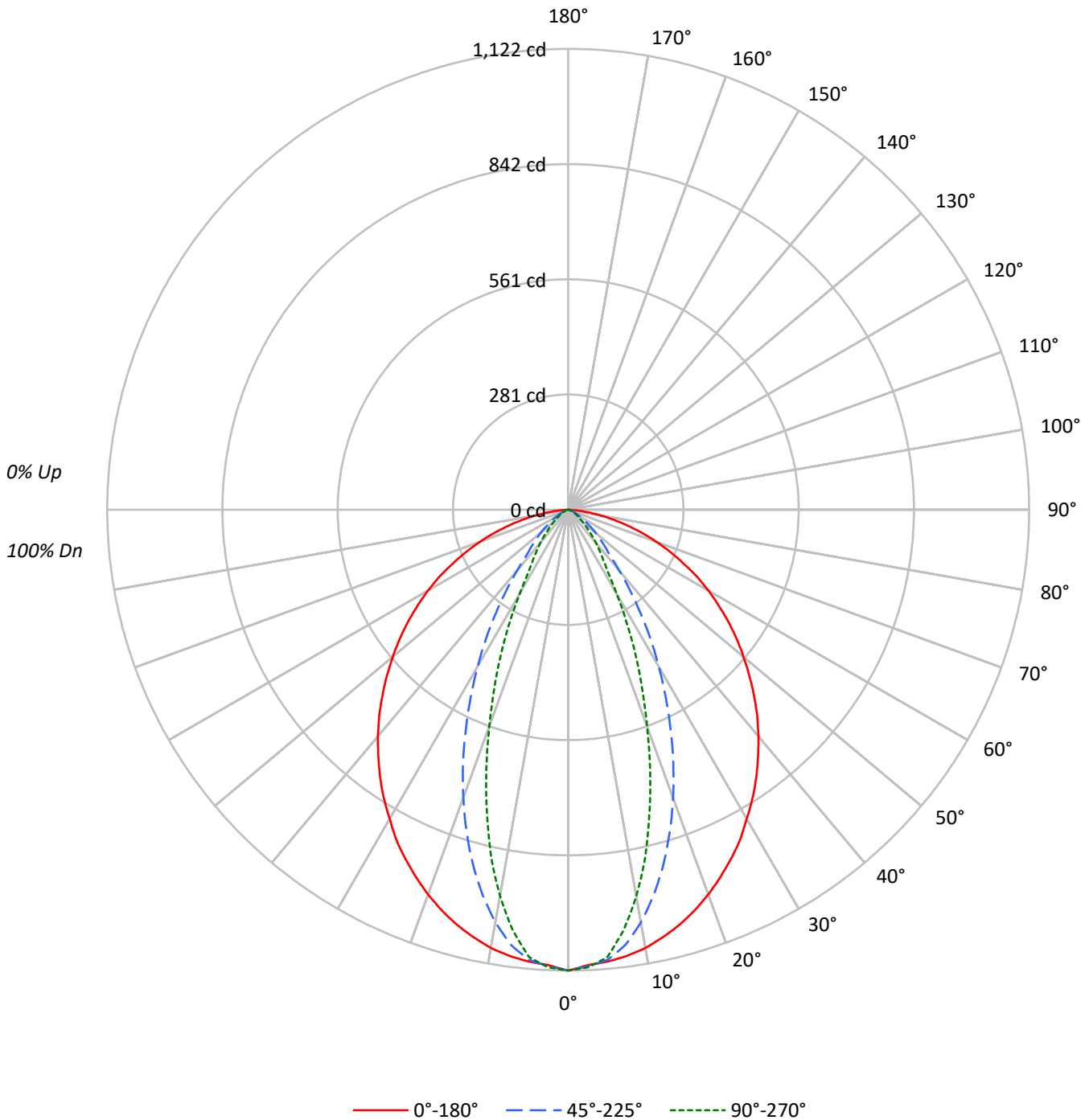
Lumens per Lamp: N/A
Luminaire Lumens: 1285.9 lumens
Efficiency: N/A
Efficacy: 35.1 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 0.64 / 0.81
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 36.6
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: P1055279

CATALOG NUMBER: S122R3DR-H1005D830-X4F0-XX-UDD-F-S

Luminous Intensity Polar Plot





TEST NUMBER: P1055279

CATALOG NUMBER: S122R3DR-H1005D830-X4F0-XX-UDD-F-S

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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	21257	21257	21257
5°	21000	20920	20791
10°	20845	19629	18386
15°	20524	17559	14995
20°	20099	15055	11311
25°	19604	12332	8077
30°	19011	9626	5143
35°	18445	7061	3435
40°	17819	4761	2584
45°	17132	3352	1843
50°	16414	2552	1297
55°	15716	1770	955
60°	14952	1197	781
65°	13870	865	619
70°	12646	687	532
75°	10973	608	403
80°	8707	447	447
85°	4782	609	304

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 17132 cd/sqm



TEST NUMBER: P1055279

CATALOG NUMBER: S122R3DR-H1005D830-X4F0-XX-UDD-F-S

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	102.6	8.0
10°-20°	251.8	19.6
20°-30°	287.6	22.4
30°-40°	243.9	19.0
40°-50°	182.0	14.2
50°-60°	117.6	9.1
60°-70°	65.6	5.1
70°-80°	28.8	2.2
80°-90°	6.0	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°	642.0	49.9
0°-40°	885.9	68.9
0°-60°	1185.6	92.2
0°-90°	1285.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1285.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1122	1122	1122	1122	1122	
5°	1104	1118	1100	1089	1093	105
15°	1046	1020	895	800	764	295
25°	938	828	590	432	386	432
35°	798	601	305	166	148	499
45°	639	380	125	81	69	493
55°	476	180	54	33	29	425
65°	309	66	19	15	14	308
75°	150	14	8	7	6	160
85°	22	1	3	1	1	31
90°	0	0	0	0	0	



TEST NUMBER: P1055279

CATALOG NUMBER: S122R3DR-H1005D830-X4F0-XX-UDD-F-S

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1122.0	1122.0	1122.0	1122.0	1122.0
2.5°	1109.7	1126.2	1112.4	1112.4	1115.2
5°	1104.2	1117.9	1100.0	1089.0	1093.2
7.5°	1095.9	1105.5	1068.4	1035.4	1032.7
10°	1083.5	1087.7	1020.3	969.4	955.7
12.5°	1065.7	1056.0	961.2	889.7	866.3
15°	1046.4	1020.3	895.2	800.3	764.5
17.5°	1023.0	976.3	822.3	706.8	662.8
20°	996.9	930.9	746.7	609.2	561.0
22.5°	968.0	880.0	668.3	517.0	468.9
25°	937.8	827.8	589.9	431.8	386.4
27.5°	906.2	772.8	512.9	354.8	305.3
30°	869.0	716.4	440.0	280.5	235.1
32.5°	834.7	657.3	372.6	217.3	178.8
35°	797.5	600.9	305.3	166.4	148.5
37.5°	759.0	544.5	246.1	140.3	125.1
40°	720.5	488.1	192.5	118.3	104.5
42.5°	680.7	433.1	148.5	99.0	85.3
45°	639.4	379.5	125.1	81.1	68.8
47.5°	598.2	325.9	104.5	64.6	55.0
50°	556.9	275.0	86.6	50.9	44.0
52.5°	517.0	226.9	68.8	41.3	35.8
55°	475.8	180.1	53.6	33.0	28.9
57.5°	434.5	140.3	41.3	27.5	24.8
60°	394.6	105.9	31.6	22.0	20.6
62.5°	353.4	85.3	24.8	17.9	16.5
65°	309.4	66.0	19.3	15.1	13.8
67.5°	269.5	48.1	15.1	12.4	11.0
70°	228.3	33.0	12.4	11.0	9.6
72.5°	188.4	20.6	9.6	8.3	8.3
75°	149.9	13.8	8.3	6.9	5.5
77.5°	114.1	8.3	5.5	5.5	4.1
80°	79.8	5.5	4.1	4.1	4.1
82.5°	49.5	4.1	2.8	2.8	2.8
85°	22.0	1.4	2.8	1.4	1.4
87.5°	4.1	1.4	1.4	1.4	1.4
90°	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P1055279
 CATALOG NUMBER: S122R3DR-H1005D830-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	18.87	20.19	19.24	20.50	20.82	5.18	6.50	5.55	6.82	7.13
	3H	21.34	22.51	21.72	22.84	23.21	6.03	7.20	6.41	7.53	7.90
	4H	22.30	23.39	22.70	23.74	24.12	6.31	7.40	6.71	7.75	8.14
	6H	22.99	23.99	23.40	24.36	24.75	6.50	7.50	6.91	7.87	8.27
	8H	23.18	24.13	23.61	24.52	24.93	6.58	7.53	7.01	7.92	8.32
	12H	23.26	24.17	23.69	24.55	24.98	6.60	7.51	7.03	7.89	8.32
4H	2H	18.66	19.75	19.06	20.10	20.48	5.76	6.85	6.16	7.20	7.58
	3H	21.14	22.04	21.55	22.44	22.84	6.79	7.69	7.20	8.09	8.49
	4H	22.08	22.89	22.52	23.30	23.75	7.16	7.96	7.59	8.38	8.82
	6H	22.84	23.53	23.30	23.98	24.44	7.45	8.14	7.91	8.59	9.05
	8H	23.08	23.73	23.55	24.17	24.65	7.55	8.19	8.02	8.64	9.11
	12H	23.21	23.78	23.70	24.26	24.74	7.60	8.17	8.08	8.65	9.12
8H	4H	21.95	22.60	22.42	23.04	23.51	7.53	8.18	8.00	8.62	9.09
	6H	22.69	23.22	23.19	23.71	24.19	7.89	8.41	8.39	8.91	9.39
	8H	22.94	23.41	23.46	23.92	24.41	8.03	8.50	8.55	9.02	9.51
	12H	23.09	23.50	23.60	23.99	24.57	8.12	8.53	8.63	9.03	9.60
12H	4H	21.91	22.48	22.39	22.96	23.43	7.65	8.22	8.14	8.70	9.18
	6H	22.63	23.10	23.15	23.62	24.11	8.01	8.48	8.53	8.99	9.49
	8H	22.89	23.31	23.41	23.80	24.37	8.19	8.61	8.71	9.10	9.67