

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: P1055363

Luminaire Tested: S122R3DR-H675D835-X4F0-XX-UDD-F-S

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055363
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-H675D835-X4F0-XX-UDD-F-S
Description: DEFINE 2, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

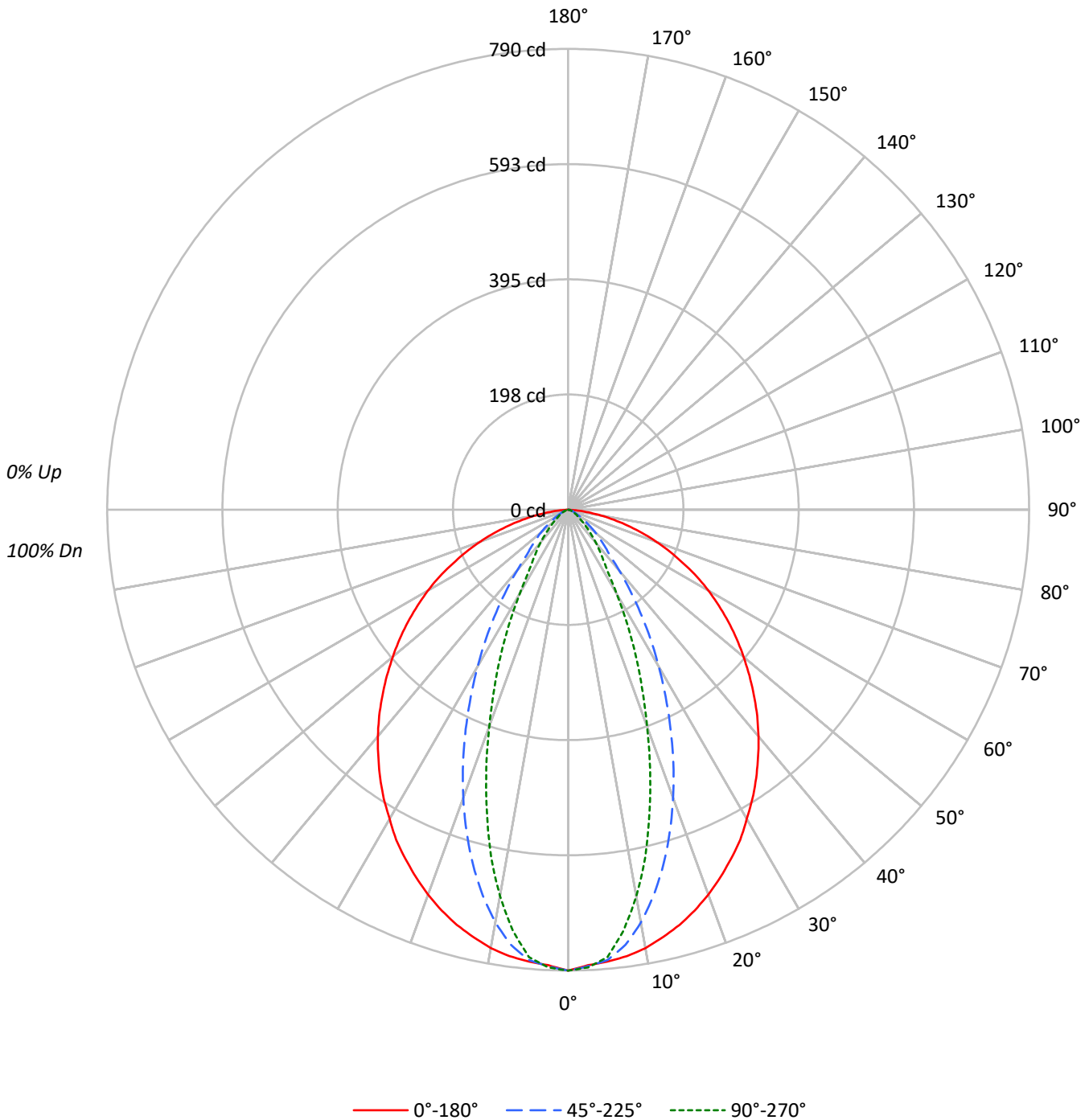
Lumens per Lamp: N/A
Luminaire Lumens: 905.6 lumens
Efficiency: N/A
Efficacy: 38.1 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 0.64 / 0.81
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 23.8
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: P1055363

CATALOG NUMBER: S122R3DR-H675D835-X4F0-XX-UDD-F-S

Luminous Intensity Polar Plot





TEST NUMBER: P1055363

CATALOG NUMBER: S122R3DR-H675D835-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°	14971	14971	14971
5°	14789	14733	14642
10°	14681	13823	12947
15°	14454	12365	10560
20°	14156	10601	7966
25°	13805	8684	5688
30°	13389	6780	3623
35°	12991	4973	2419
40°	12549	3354	1820
45°	12065	2361	1297
50°	11560	1798	914
55°	11069	1249	671
60°	10530	845	549
65°	9768	610	435
70°	8902	482	377
75°	7730	425	285
80°	6132	316	316
85°	3369	413	217

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 12065 cd/sqm



TEST NUMBER: P1055363

CATALOG NUMBER: S122R3DR-H675D835-X4F0-XX-UDD-F-S

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	72.2	8.0
10°-20°	177.3	19.6
20°-30°	202.6	22.4
30°-40°	171.8	19.0
40°-50°	128.2	14.2
50°-60°	82.8	9.1
60°-70°	46.2	5.1
70°-80°	20.3	2.2
80°-90°	4.2	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°	452.1	49.9
0°-40°	623.9	68.9
0°-60°	834.9	92.2
0°-90°	905.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	905.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	790	790	790	790	790	
5°	778	787	775	767	770	74
15°	737	718	630	564	538	208
25°	660	583	415	304	272	304
35°	562	423	215	117	105	351
45°	450	267	88	57	48	347
55°	335	127	38	23	20	300
65°	218	46	14	11	10	217
75°	106	10	6	5	4	113
85°	16	1	2	1	1	22
90°	0	0	0	0	0	



TEST NUMBER: P1055363

CATALOG NUMBER: S122R3DR-H675D835-X4F0-XX-UDD-F-S

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	790.2	790.2	790.2	790.2	790.2
2.5°	781.5	793.1	783.4	783.4	785.3
5°	777.6	787.3	774.7	766.9	769.9
7.5°	771.8	778.6	752.4	729.2	727.2
10°	763.1	766.0	718.5	682.7	673.0
12.5°	750.5	743.7	676.9	626.5	610.1
15°	736.9	718.5	630.4	563.6	538.4
17.5°	720.5	687.5	579.1	497.7	466.8
20°	702.1	655.6	525.8	429.0	395.1
22.5°	681.7	619.8	470.6	364.1	330.2
25°	660.4	583.0	415.4	304.1	272.1
27.5°	638.2	544.2	361.2	249.8	215.0
30°	612.0	504.5	309.9	197.5	165.6
32.5°	587.8	462.9	262.4	153.0	125.9
35°	561.7	423.2	215.0	117.2	104.6
37.5°	534.5	383.5	173.3	98.8	88.1
40°	507.4	343.8	135.6	83.3	73.6
42.5°	479.3	305.0	104.6	69.7	60.0
45°	450.3	267.3	88.1	57.1	48.4
47.5°	421.2	229.5	73.6	45.5	38.7
50°	392.2	193.7	61.0	35.8	31.0
52.5°	364.1	159.8	48.4	29.1	25.2
55°	335.1	126.9	37.8	23.2	20.3
57.5°	306.0	98.8	29.1	19.4	17.4
60°	277.9	74.6	22.3	15.5	14.5
62.5°	248.9	60.0	17.4	12.6	11.6
65°	217.9	46.5	13.6	10.7	9.7
67.5°	189.8	33.9	10.7	8.7	7.7
70°	160.7	23.2	8.7	7.7	6.8
72.5°	132.7	14.5	6.8	5.8	5.8
75°	105.6	9.7	5.8	4.8	3.9
77.5°	80.4	5.8	3.9	3.9	2.9
80°	56.2	3.9	2.9	2.9	2.9
82.5°	34.9	2.9	1.9	1.9	1.9
85°	15.5	1.0	1.9	1.0	1.0
87.5°	2.9	1.0	1.0	1.0	1.0
90°	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P1055363
 CATALOG NUMBER: S122R3DR-H675D835-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	17.65	18.97	18.02	19.29	19.60	3.97	5.29	4.34	5.60	5.92
	3H	20.12	21.29	20.50	21.62	21.99	4.81	5.99	5.19	6.32	6.68
	4H	21.08	22.17	21.48	22.52	22.91	5.09	6.18	5.49	6.53	6.91
	6H	21.77	22.77	22.18	23.14	23.54	5.28	6.28	5.69	6.65	7.05
	8H	21.96	22.91	22.39	23.30	23.71	5.35	6.30	5.78	6.69	7.10
	12H	22.05	22.95	22.48	23.34	23.77	5.38	6.28	5.81	6.67	7.10
4H	2H	17.44	18.53	17.84	18.88	19.27	4.55	5.64	4.95	5.99	6.37
	3H	19.92	20.82	20.33	21.22	21.62	5.57	6.46	5.98	6.87	7.27
	4H	20.87	21.67	21.30	22.09	22.53	5.93	6.73	6.37	7.15	7.60
	6H	21.62	22.31	22.08	22.76	23.23	6.23	6.92	6.69	7.36	7.83
	8H	21.87	22.51	22.33	22.96	23.43	6.32	6.97	6.79	7.41	7.88
	12H	21.99	22.56	22.48	23.05	23.52	6.37	6.94	6.85	7.42	7.89
8H	4H	20.73	21.38	21.20	21.83	22.30	6.31	6.95	6.77	7.40	7.87
	6H	21.47	22.00	21.98	22.49	22.98	6.67	7.19	7.17	7.69	8.17
	8H	21.72	22.19	22.24	22.70	23.20	6.80	7.27	7.32	7.79	8.28
	12H	21.87	22.28	22.38	22.78	23.35	6.89	7.30	7.40	7.79	8.37
12H	4H	20.69	21.26	21.18	21.74	22.21	6.43	7.00	6.91	7.48	7.95
	6H	21.41	21.88	21.93	22.40	22.89	6.78	7.26	7.31	7.77	8.26
	8H	21.68	22.09	22.19	22.59	23.16	6.96	7.37	7.47	7.87	8.44