

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: P1055184

Luminaire Tested: S122R3DR-S290D927-X4F0-XX-UDD-F-W

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055184
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-1)
Test Lab: INNOVATION CENTER
Issue Date: 7/25/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S122R3DR-S290D927-X4F0-XX-UDD-F-W
Description: DEFINE 2, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 2700K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

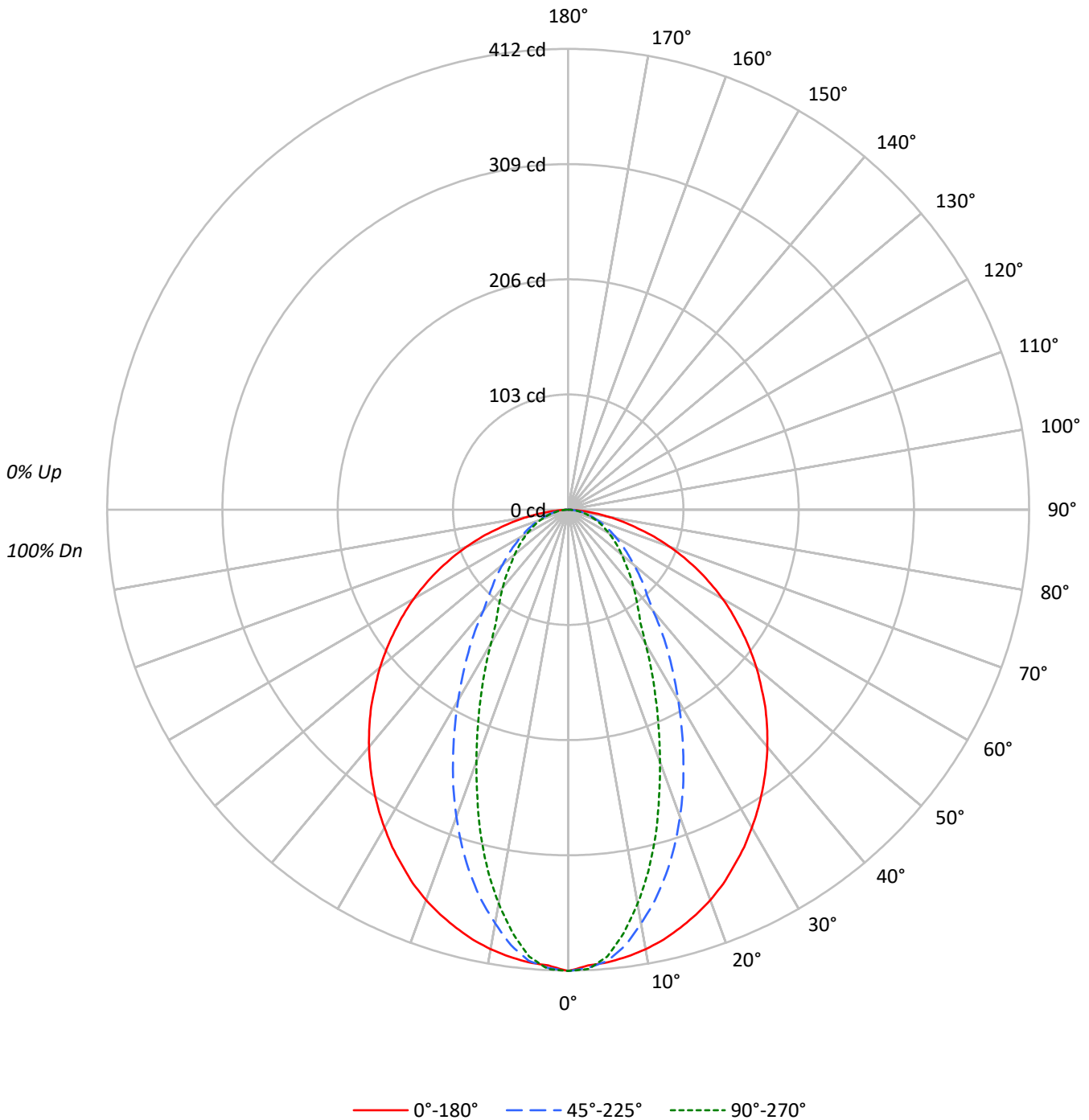
Lumens per Lamp: N/A
Luminaire Lumens: 623.8 lumens
Efficiency: N/A
Efficacy: 49.5 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.71 / 0.9
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 12.6
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: P1055184

CATALOG NUMBER: S122R3DR-S290D927-X4F0-XX-UDD-F-W

Luminous Intensity Polar Plot





TEST NUMBER: P1055184

CATALOG NUMBER: S122R3DR-S290D927-X4F0-XX-UDD-F-W

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	50	30	10	0	
RCR																						
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100				100
1	110	106	102	99	108	104	101	97	100	97	94	96	94	92	92	91	89	87				87
2	102	95	89	84	99	93	87	83	89	85	81	86	82	79	83	80	77	75				75
3	94	85	78	72	92	83	77	71	80	75	70	78	73	69	75	71	68	66				66
4	87	76	69	63	85	75	68	62	73	66	61	71	65	61	68	64	60	58				58
5	81	69	61	55	79	68	61	55	66	60	55	64	59	54	63	58	54	52				52
6	75	63	55	50	74	63	55	49	61	54	49	59	53	49	58	52	48	46				46
7	71	58	50	45	69	58	50	45	56	49	44	55	49	44	53	48	44	42				42
8	66	54	46	41	65	53	46	41	52	45	40	51	45	40	50	44	40	38				38
9	62	50	43	37	61	49	42	37	48	42	37	47	41	37	46	41	37	35				35
10	59	47	39	35	58	46	39	34	45	39	34	44	38	34	43	38	34	32				32

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7813	7813	7813
5°	7725	7699	7626
10°	7674	7224	6880
15°	7589	6622	5918
20°	7488	5887	4831
25°	7337	5088	3857
30°	7182	4299	3010
35°	7017	3596	2528
40°	6848	2916	2251
45°	6669	2551	2015
50°	6473	2255	1839
55°	6253	2038	1708
60°	6036	1857	1595
65°	5752	1699	1497
70°	5329	1584	1413
75°	4721	1442	1340
80°	4026	1353	1244
85°	2782	1196	1130

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6669 cd/sqm



TEST NUMBER: P1055184

CATALOG NUMBER: S122R3DR-S290D927-X4F0-XX-UDD-F-W

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	37.8	6.1
10°-20°	95.4	15.3
20°-30°	117.6	18.8
30°-40°	112.8	18.1
40°-50°	97.3	15.6
50°-60°	75.5	12.1
60°-70°	51.7	8.3
70°-80°	28.1	4.5
80°-90°	7.7	1.2
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°	250.8	40.2
0°-40°	363.6	58.3
0°-60°	536.3	86.0
0°-90°	623.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	623.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	412	412	412	412	412	
5°	406	412	405	400	401	39
15°	387	375	338	310	302	109
25°	351	313	243	199	184	162
35°	303	241	156	116	109	190
45°	249	168	95	79	75	192
55°	189	101	62	53	52	169
65°	128	55	38	34	33	127
75°	64	25	20	19	18	69
85°	13	6	6	6	5	16
90°	0	0	0	0	0	



TEST NUMBER: P1055184

CATALOG NUMBER: S122R3DR-S290D927-X4F0-XX-UDD-F-W

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	412.4	412.4	412.4	412.4	412.4
2.5°	407.9	414.8	410.0	410.0	411.0
5°	406.2	412.0	404.8	399.6	401.0
7.5°	403.1	407.2	392.7	381.7	381.4
10°	398.9	399.3	375.5	361.0	357.6
12.5°	393.8	388.2	357.9	336.2	331.0
15°	386.9	375.1	337.6	310.0	301.7
17.5°	379.6	361.7	315.8	281.4	270.0
20°	371.4	345.5	292.0	252.7	239.6
22.5°	362.0	330.0	268.3	225.2	211.4
25°	351.0	313.4	243.4	198.6	184.5
27.5°	340.3	296.5	219.6	175.2	160.7
30°	328.3	278.3	196.5	152.7	137.6
32.5°	316.2	259.6	175.2	131.4	120.0
35°	303.4	240.7	155.5	115.9	109.3
37.5°	290.3	222.1	136.9	105.5	99.6
40°	276.9	203.4	117.9	95.5	91.0
42.5°	263.1	185.2	104.8	87.2	83.1
45°	248.9	167.6	95.2	78.6	75.2
47.5°	233.8	150.0	85.9	71.4	68.3
50°	219.6	133.1	76.5	64.8	62.4
52.5°	204.5	116.5	69.0	59.0	56.9
55°	189.3	100.7	61.7	53.4	51.7
57.5°	174.5	85.5	54.8	48.3	46.9
60°	159.3	73.4	49.0	43.4	42.1
62.5°	143.8	63.8	43.4	39.0	37.6
65°	128.3	54.8	37.9	34.5	33.4
67.5°	112.1	46.2	33.1	30.3	29.7
70°	96.2	38.6	28.6	26.2	25.5
72.5°	80.7	31.4	24.1	22.4	21.7
75°	64.5	25.2	19.7	18.6	18.3
77.5°	50.3	19.7	15.9	15.2	14.8
80°	36.9	14.5	12.4	11.7	11.4
82.5°	24.5	10.0	9.0	8.6	8.3
85°	12.8	6.2	5.5	5.5	5.2
87.5°	4.1	2.8	2.8	2.8	2.4
90°	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P1055184

CATALOG NUMBER: S122R3DR-S290D927-X4F0-XX-UDD-F-W

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	16.75	18.22	17.12	18.53	18.85	11.56	13.03	11.92	13.34	13.66
	3H	19.08	20.40	19.46	20.73	21.09	13.21	14.52	13.58	14.85	15.21
	4H	19.98	21.21	20.38	21.56	21.94	13.84	15.08	14.24	15.42	15.80
	6H	20.64	21.78	21.05	22.15	22.54	14.33	15.47	14.75	15.84	16.23
	8H	20.85	21.93	21.27	22.32	22.72	14.50	15.59	14.93	15.98	16.38
	12H	20.96	22.00	21.39	22.38	22.81	14.62	15.66	15.05	16.04	16.47
4H	2H	16.77	18.00	17.17	18.35	18.73	12.27	13.51	12.67	13.86	14.24
	3H	19.18	20.20	19.59	20.61	21.01	14.12	15.15	14.53	15.55	15.95
	4H	20.11	21.03	20.54	21.45	21.89	14.87	15.79	15.30	16.21	16.65
	6H	20.89	21.69	21.35	22.13	22.59	15.48	16.28	15.94	16.73	17.19
	8H	21.16	21.91	21.62	22.35	22.82	15.70	16.45	16.16	16.89	17.36
	12H	21.34	22.00	21.82	22.48	22.96	15.86	16.53	16.34	17.01	17.48
8H	4H	20.10	20.85	20.57	21.30	21.77	15.25	16.00	15.71	16.44	16.91
	6H	20.91	21.53	21.41	22.02	22.50	15.98	16.60	16.48	17.09	17.57
	8H	21.21	21.77	21.73	22.28	22.77	16.28	16.83	16.79	17.34	17.83
	12H	21.44	21.93	21.96	22.43	22.99	16.52	17.01	17.03	17.51	18.07
12H	4H	20.08	20.75	20.57	21.23	21.70	15.30	15.97	15.79	16.45	16.92
	6H	20.89	21.44	21.40	21.95	22.44	16.07	16.62	16.59	17.14	17.62
	8H	21.22	21.71	21.73	22.20	22.77	16.43	16.92	16.94	17.41	17.97