

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: P1055278

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

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055278
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-2)
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-B
Description: DEFINE 2, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

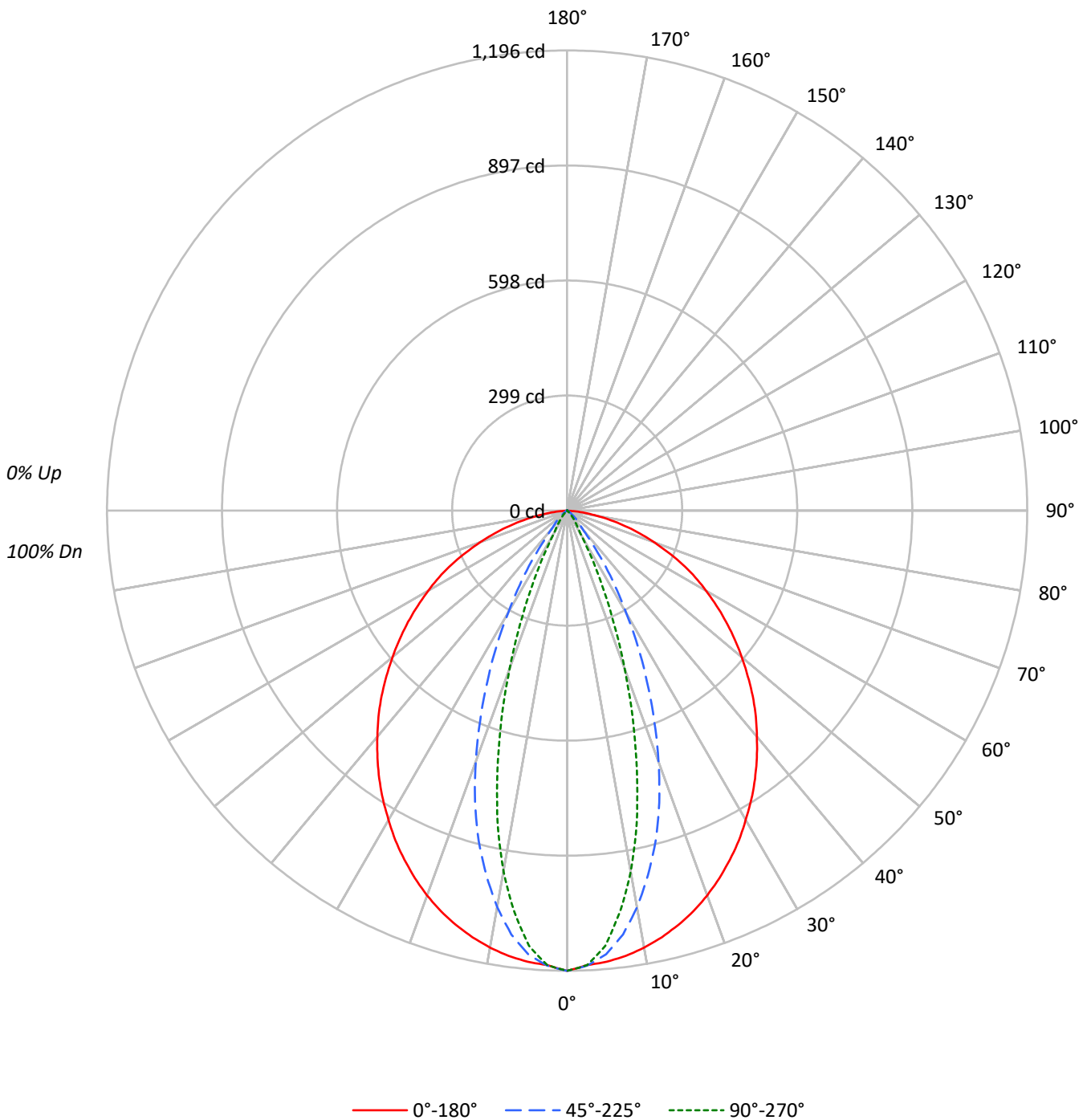
Lumens per Lamp: N/A
Luminaire Lumens: 1088.4 lumens
Efficiency: N/A
Efficacy: 29.7 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 0.56 / 0.7
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

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: P1055278

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

Luminous Intensity Polar Plot





TEST NUMBER: P1055278

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

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	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	112	109	106	103	110	106	104	101	102	100	98	99	97	95	95	94	92	91					91			
2	105	99	94	90	103	97	93	89	94	90	87	91	88	85	88	86	83	81					81			
3	98	91	85	80	96	89	84	79	86	82	78	84	80	77	82	78	75	74					74			
4	92	83	77	72	90	82	76	71	80	75	70	78	73	70	76	72	69	67					67			
5	87	77	70	65	85	76	70	65	74	69	64	72	68	64	71	66	63	61					61			
6	82	72	65	60	80	71	64	59	69	63	59	68	62	59	66	62	58	56					56			
7	77	67	60	55	76	66	59	55	65	59	55	63	58	54	62	57	54	52					52			
8	73	62	56	51	72	62	55	51	61	55	51	60	54	50	59	54	50	49					49			
9	70	59	52	48	68	58	52	47	57	51	47	56	51	47	55	50	47	45					45			
10	66	55	49	45	65	55	49	44	54	48	44	53	48	44	52	47	44	43					43			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	22665	22665	22665
5°	22386	22019	21601
10°	22195	20131	18332
15°	21874	17423	13728
20°	21458	14000	8789
25°	20925	10262	4513
30°	20306	6707	1474
35°	19687	3721	858
40°	18977	1496	477
45°	18273	994	185
50°	17470	569	83
55°	16667	274	46
60°	15786	106	0
65°	14857	63	0
70°	13328	78	0
75°	11478	102	0
80°	8707	0	0
85°	3587	304	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 18273 cd/sqm



TEST NUMBER: P1055278

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

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	107.3	9.9
10°-20°	249.2	22.9
20°-30°	253.0	23.2
30°-40°	189.8	17.4
40°-50°	132.9	12.2
50°-60°	81.4	7.5
60°-70°	48.5	4.5
70°-80°	22.4	2.1
80°-90°	4.0	0.4
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°	609.4	56.0
0°-40°	799.3	73.4
0°-60°	1013.6	93.1
0°-90°	1088.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1088.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1196	1196	1196	1196	1196	
5°	1177	1188	1158	1136	1136	112
15°	1115	1055	888	752	700	314
25°	1001	825	491	280	216	461
35°	851	554	161	48	37	532
45°	682	293	37	11	7	526
55°	505	89	8	3	1	451
65°	331	26	1	1	0	326
75°	157	3	1	1	0	166
85°	16	0	1	1	0	28
90°	0	0	0	0	0	



TEST NUMBER: P1055278

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

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1196.3	1196.3	1196.3	1196.3	1196.3
2.5°	1182.6	1200.4	1183.9	1181.2	1182.6
5°	1177.1	1188.1	1157.8	1135.8	1135.8
7.5°	1167.4	1167.4	1111.1	1065.7	1051.9
10°	1153.7	1138.6	1046.4	973.5	952.9
12.5°	1135.8	1100.1	970.8	867.7	834.7
15°	1115.2	1054.7	888.3	752.2	699.9
17.5°	1091.8	1003.8	796.2	627.0	566.5
20°	1064.3	948.8	694.4	499.1	435.9
22.5°	1034.1	888.3	591.3	385.0	317.6
25°	1001.0	825.0	490.9	280.5	215.9
27.5°	966.7	759.0	398.8	192.5	132.0
30°	928.2	690.3	306.6	114.1	67.4
32.5°	891.0	624.3	229.6	61.9	49.5
35°	851.2	554.2	160.9	48.1	37.1
37.5°	809.9	488.1	99.0	35.8	27.5
40°	767.3	420.8	60.5	26.1	19.3
42.5°	726.0	357.5	48.1	17.9	12.4
45°	682.0	292.9	37.1	11.0	6.9
47.5°	636.7	233.8	27.5	6.9	4.1
50°	592.7	181.5	19.3	4.1	2.8
52.5°	548.7	133.4	12.4	2.8	1.4
55°	504.6	89.4	8.3	2.8	1.4
57.5°	460.6	63.3	5.5	1.4	1.4
60°	416.6	49.5	2.8	1.4	0.0
62.5°	375.4	38.5	2.8	1.4	1.4
65°	331.4	26.1	1.4	1.4	0.0
67.5°	284.6	16.5	1.4	1.4	0.0
70°	240.6	9.6	1.4	1.4	0.0
72.5°	198.0	5.5	1.4	1.4	0.0
75°	156.8	2.8	1.4	1.4	0.0
77.5°	116.9	1.4	0.0	1.4	0.0
80°	79.8	0.0	0.0	1.4	0.0
82.5°	46.8	0.0	0.0	1.4	0.0
85°	16.5	0.0	1.4	1.4	0.0
87.5°	0.0	0.0	1.4	1.4	0.0
90°	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P1055278
 CATALOG NUMBER: S122R3DR-H1005D830-X4F0-XX-UDD-F-B

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	17.06	18.32	17.42	18.63	18.94	0.00	0.00	0.00	0.00	0.00
	3H	20.80	21.91	21.18	22.24	22.61	0.00	0.00	0.00	0.00	0.00
	4H	22.11	23.15	22.51	23.50	23.88	0.00	0.00	0.00	0.00	0.00
	6H	22.96	23.92	23.38	24.29	24.68	0.00	0.00	0.00	0.00	0.00
	8H	23.18	24.08	23.61	24.47	24.88	0.00	0.00	0.00	0.00	0.00
	12H	23.24	24.10	23.67	24.49	24.92	0.00	0.00	0.00	0.00	0.00
4H	2H	16.81	17.85	17.21	18.20	18.59	0.00	0.00	0.00	0.00	0.00
	3H	20.55	21.40	20.96	21.81	22.21	0.00	0.00	0.00	0.00	0.00
	4H	21.85	22.61	22.28	23.03	23.47	0.00	0.00	0.00	0.00	0.00
	6H	22.76	23.42	23.23	23.87	24.34	0.00	0.00	0.00	0.00	0.00
	8H	23.02	23.64	23.49	24.08	24.56	0.00	0.00	0.00	0.00	0.00
	12H	23.13	23.66	23.61	24.15	24.62	0.00	0.00	0.00	0.00	0.00
8H	4H	21.70	22.31	22.17	22.76	23.23	0.00	0.00	0.00	0.00	0.00
	6H	22.60	23.10	23.11	23.60	24.08	0.00	0.00	0.00	0.00	0.00
	8H	22.86	23.30	23.38	23.82	24.31	0.00	0.00	0.00	0.00	0.00
	12H	22.98	23.37	23.49	23.86	24.44	0.00	0.00	0.00	0.00	0.00
12H	4H	21.65	22.19	22.14	22.67	23.15	0.00	0.00	0.00	0.00	0.00
	6H	22.54	22.98	23.06	23.50	23.99	0.00	0.00	0.00	0.00	0.00
	8H	22.82	23.20	23.33	23.70	24.27	0.00	0.00	0.00	0.00	0.00