

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: P1055152

Luminaire Tested: S122R3DR-S1005D850-X4F0-XX-UDD-F-B

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055152
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-S1005D850-X4F0-XX-UDD-F-B
Description: DEFINE 2, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 5000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

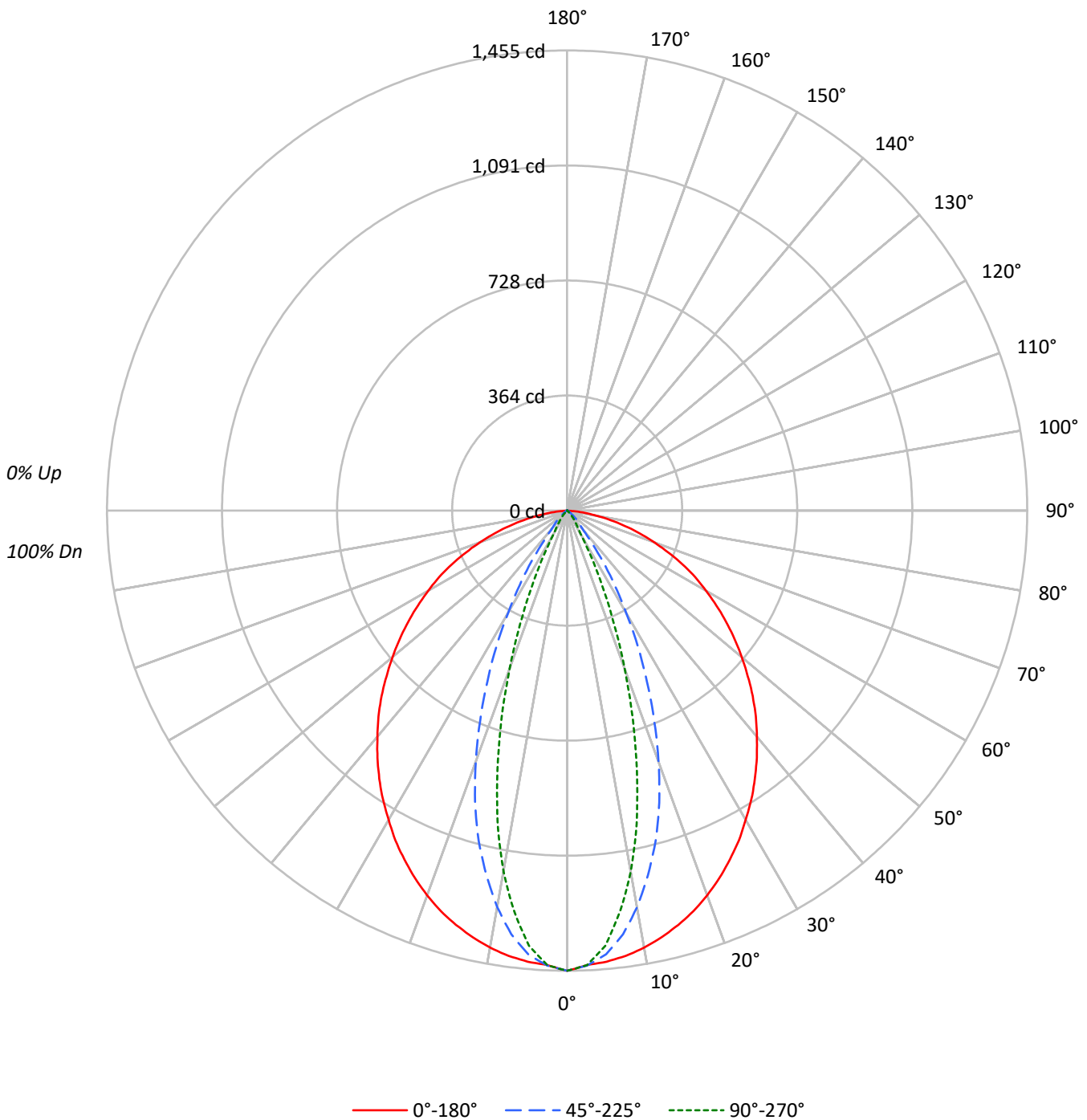
Lumens per Lamp: N/A
Luminaire Lumens: 1323.9 lumens
Efficiency: N/A
Efficacy: 31.6 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 0.56 / 0.7
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 41.9
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: P1055152

CATALOG NUMBER: S122R3DR-S1005D850-X4F0-XX-UDD-F-B

Luminous Intensity Polar Plot





TEST NUMBER: P1055152

CATALOG NUMBER: S122R3DR-S1005D850-X4F0-XX-UDD-F-B

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	27568	27568	27568
5°	27228	26783	26274
10°	26997	24486	22299
15°	26605	21193	16698
20°	26101	17029	10690
25°	25453	12482	5490
30°	24699	8160	1794
35°	23945	4526	1045
40°	23082	1820	579
45°	22228	1211	225
50°	21248	690	97
55°	20274	330	56
60°	19204	125	0
65°	18071	76	0
70°	16214	94	0
75°	13959	124	0
80°	10583	0	0
85°	4369	370	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 22228 cd/sqm



TEST NUMBER: P1055152

CATALOG NUMBER: S122R3DR-S1005D850-X4F0-XX-UDD-F-B

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	130.5	9.9
10°-20°	303.1	22.9
20°-30°	307.7	23.2
30°-40°	230.9	17.4
40°-50°	161.7	12.2
50°-60°	99.0	7.5
60°-70°	58.9	4.5
70°-80°	27.2	2.1
80°-90°	4.9	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°	741.3	56.0
0°-40°	972.2	73.4
0°-60°	1232.8	93.1
0°-90°	1323.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1323.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1455	1455	1455	1455	1455	
5°	1432	1445	1408	1382	1382	136
15°	1356	1283	1080	915	851	382
25°	1218	1004	597	341	263	560
35°	1035	674	196	58	45	647
45°	830	356	45	13	8	639
55°	614	109	10	3	2	549
65°	403	32	2	2	0	397
75°	191	3	2	2	0	203
85°	20	0	2	2	0	34
90°	0	0	0	0	0	



TEST NUMBER: P1055152

CATALOG NUMBER: S122R3DR-S1005D850-X4F0-XX-UDD-F-B

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1455.1	1455.1	1455.1	1455.1	1455.1
2.5°	1438.4	1460.1	1440.1	1436.7	1438.4
5°	1431.7	1445.1	1408.3	1381.5	1381.5
7.5°	1420.0	1420.0	1351.4	1296.2	1279.5
10°	1403.3	1384.9	1272.8	1184.2	1159.1
12.5°	1381.5	1338.0	1180.8	1055.4	1015.2
15°	1356.4	1282.8	1080.5	914.9	851.3
17.5°	1328.0	1221.0	968.4	762.7	689.1
20°	1294.6	1154.1	844.6	607.1	530.2
22.5°	1257.8	1080.5	719.2	468.3	386.4
25°	1217.6	1003.5	597.1	341.2	262.6
27.5°	1175.8	923.2	485.0	234.2	160.6
30°	1129.0	839.6	373.0	138.8	82.0
32.5°	1083.8	759.3	279.3	75.3	60.2
35°	1035.3	674.0	195.7	58.5	45.2
37.5°	985.1	593.8	120.4	43.5	33.5
40°	933.3	511.8	73.6	31.8	23.4
42.5°	883.1	434.9	58.5	21.7	15.1
45°	829.6	356.3	45.2	13.4	8.4
47.5°	774.4	284.3	33.5	8.4	5.0
50°	720.9	220.8	23.4	5.0	3.3
52.5°	667.3	162.2	15.1	3.3	1.7
55°	613.8	108.7	10.0	3.3	1.7
57.5°	560.3	76.9	6.7	1.7	1.7
60°	506.8	60.2	3.3	1.7	0.0
62.5°	456.6	46.8	3.3	1.7	1.7
65°	403.1	31.8	1.7	1.7	0.0
67.5°	346.2	20.1	1.7	1.7	0.0
70°	292.7	11.7	1.7	1.7	0.0
72.5°	240.8	6.7	1.7	1.7	0.0
75°	190.7	3.3	1.7	1.7	0.0
77.5°	142.2	1.7	0.0	1.7	0.0
80°	97.0	0.0	0.0	1.7	0.0
82.5°	56.9	0.0	0.0	1.7	0.0
85°	20.1	0.0	1.7	1.7	0.0
87.5°	0.0	0.0	1.7	1.7	0.0
90°	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P1055152
 CATALOG NUMBER: S122R3DR-S1005D850-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	17.73	18.99	18.10	19.31	19.62	0.00	0.00	0.00	0.00	0.00
	3H	21.48	22.59	21.86	22.92	23.29	0.00	0.00	0.00	0.00	0.00
	4H	22.79	23.83	23.19	24.18	24.56	0.00	0.00	0.00	0.00	0.00
	6H	23.64	24.60	24.06	24.97	25.36	0.00	0.00	0.00	0.00	0.00
	8H	23.86	24.76	24.29	25.15	25.56	0.00	0.00	0.00	0.00	0.00
	12H	23.92	24.78	24.35	25.17	25.60	0.00	0.00	0.00	0.00	0.00
4H	2H	17.49	18.53	17.89	18.88	19.26	0.00	0.00	0.00	0.00	0.00
	3H	21.23	22.08	21.64	22.49	22.89	0.00	0.00	0.00	0.00	0.00
	4H	22.53	23.29	22.96	23.71	24.15	0.00	0.00	0.00	0.00	0.00
	6H	23.44	24.10	23.91	24.55	25.02	0.00	0.00	0.00	0.00	0.00
	8H	23.70	24.32	24.17	24.76	25.23	0.00	0.00	0.00	0.00	0.00
	12H	23.81	24.34	24.29	24.83	25.30	0.00	0.00	0.00	0.00	0.00
8H	4H	22.38	22.99	22.85	23.44	23.91	0.00	0.00	0.00	0.00	0.00
	6H	23.28	23.78	23.79	24.28	24.76	0.00	0.00	0.00	0.00	0.00
	8H	23.54	23.98	24.06	24.50	24.99	0.00	0.00	0.00	0.00	0.00
	12H	23.66	24.05	24.17	24.54	25.12	0.00	0.00	0.00	0.00	0.00
12H	4H	22.33	22.87	22.82	23.35	23.83	0.00	0.00	0.00	0.00	0.00
	6H	23.22	23.66	23.74	24.18	24.67	0.00	0.00	0.00	0.00	0.00
	8H	23.50	23.88	24.01	24.38	24.95	0.00	0.00	0.00	0.00	0.00