

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: P1055207

Luminaire Tested: S122R3DR-S485D850-X4F0-XX-UDD-F-S

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055207
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-S485D850-X4F0-XX-UDD-F-S
Description: DEFINE 2, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 5000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

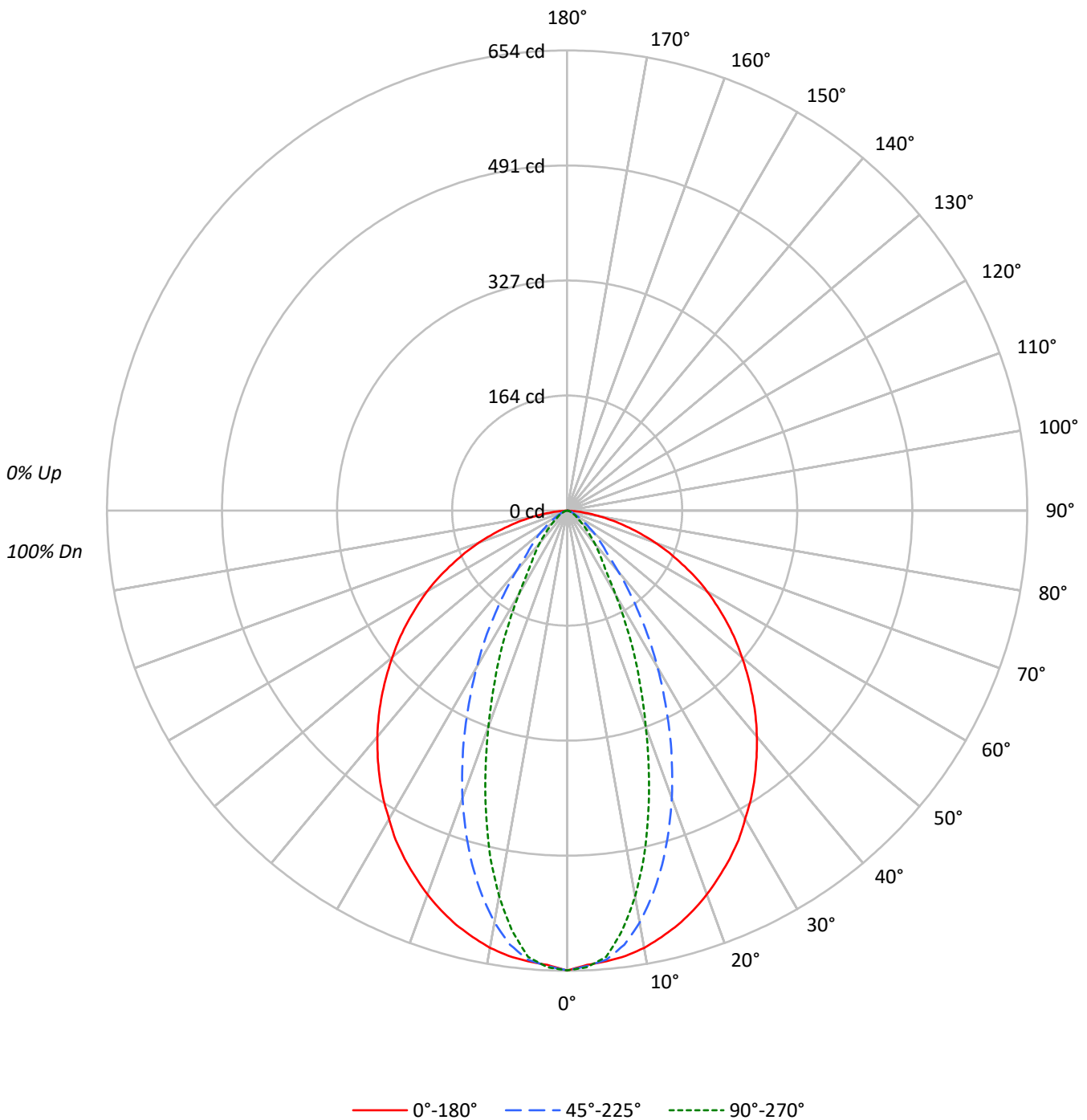
Lumens per Lamp: N/A
Luminaire Lumens: 748.9 lumens
Efficiency: N/A
Efficacy: 39.2 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 0.64 / 0.81
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 19.1
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

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Luminous Intensity Polar Plot





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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°	12381	12381	12381
5°	12231	12185	12109
10°	12141	11431	10708
15°	11955	10227	8734
20°	11706	8768	6587
25°	11418	7183	4703
30°	11072	5607	2995
35°	10743	4112	2001
40°	10378	2772	1506
45°	9978	1953	1072
50°	9559	1488	755
55°	9153	1031	555
60°	8708	697	455
65°	8078	502	359
70°	7362	399	310
75°	6390	351	234
80°	5062	262	262
85°	2782	348	174

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 9978 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	59.7	8.0
10°-20°	146.6	19.6
20°-30°	167.5	22.4
30°-40°	142.1	19.0
40°-50°	106.0	14.2
50°-60°	68.5	9.1
60°-70°	38.2	5.1
70°-80°	16.8	2.2
80°-90°	3.5	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°	373.9	49.9
0°-40°	516.0	68.9
0°-60°	690.5	92.2
0°-90°	748.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	748.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	654	654	654	654	654	
5°	643	651	641	634	637	61
15°	610	594	521	466	445	172
25°	546	482	344	252	225	251
35°	464	350	178	97	86	290
45°	372	221	73	47	40	287
55°	277	105	31	19	17	248
65°	180	38	11	9	8	179
75°	87	8	5	4	3	93
85°	13	1	2	1	1	18
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	653.5	653.5	653.5	653.5	653.5
2.5°	646.3	655.9	647.9	647.9	649.5
5°	643.1	651.1	640.7	634.3	636.7
7.5°	638.3	643.9	622.3	603.0	601.4
10°	631.1	633.5	594.2	564.6	556.6
12.5°	620.7	615.1	559.8	518.2	504.5
15°	609.5	594.2	521.4	466.1	445.3
17.5°	595.8	568.6	478.9	411.6	386.0
20°	580.6	542.2	434.9	354.8	326.7
22.5°	563.8	512.5	389.2	301.1	273.1
25°	546.2	482.1	343.6	251.5	225.0
27.5°	527.8	450.1	298.7	206.6	177.8
30°	506.1	417.2	256.3	163.4	136.9
32.5°	486.1	382.8	217.0	126.5	104.1
35°	464.5	350.0	177.8	96.9	86.5
37.5°	442.1	317.1	143.4	81.7	72.9
40°	419.6	284.3	112.1	68.9	60.9
42.5°	396.4	252.3	86.5	57.7	49.7
45°	372.4	221.0	72.9	47.3	40.0
47.5°	348.4	189.8	60.9	37.6	32.0
50°	324.3	160.2	50.5	29.6	25.6
52.5°	301.1	132.1	40.0	24.0	20.8
55°	277.1	104.9	31.2	19.2	16.8
57.5°	253.1	81.7	24.0	16.0	14.4
60°	229.8	61.7	18.4	12.8	12.0
62.5°	205.8	49.7	14.4	10.4	9.6
65°	180.2	38.4	11.2	8.8	8.0
67.5°	157.0	28.0	8.8	7.2	6.4
70°	132.9	19.2	7.2	6.4	5.6
72.5°	109.7	12.0	5.6	4.8	4.8
75°	87.3	8.0	4.8	4.0	3.2
77.5°	66.5	4.8	3.2	3.2	2.4
80°	46.4	3.2	2.4	2.4	2.4
82.5°	28.8	2.4	1.6	1.6	1.6
85°	12.8	0.8	1.6	0.8	0.8
87.5°	2.4	0.8	0.8	0.8	0.8
90°	0.0	0.0	0.0	0.0	0.0

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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	16.99	18.31	17.36	18.63	18.94	3.30	4.62	3.66	4.93	5.24
	3H	19.46	20.63	19.84	20.96	21.33	4.15	5.32	4.53	5.65	6.01
	4H	20.42	21.51	20.82	21.86	22.25	4.42	5.51	4.82	5.86	6.25
	6H	21.11	22.11	21.52	22.48	22.87	4.61	5.62	5.03	5.99	6.38
	8H	21.30	22.25	21.73	22.64	23.05	4.69	5.64	5.12	6.03	6.43
	12H	21.38	22.29	21.82	22.67	23.10	4.71	5.62	5.14	6.00	6.43
4H	2H	16.78	17.87	17.18	18.22	18.61	3.87	4.96	4.27	5.31	5.69
	3H	19.26	20.16	19.68	20.56	20.96	4.90	5.80	5.31	6.20	6.60
	4H	20.21	21.01	20.64	21.43	21.87	5.27	6.07	5.70	6.49	6.93
	6H	20.96	21.65	21.42	22.10	22.56	5.56	6.25	6.02	6.70	7.16
	8H	21.20	21.85	21.67	22.29	22.77	5.66	6.30	6.13	6.75	7.22
	12H	21.33	21.90	21.82	22.38	22.86	5.70	6.27	6.19	6.76	7.23
8H	4H	20.07	20.72	20.54	21.16	21.64	5.64	6.28	6.11	6.73	7.20
	6H	20.81	21.34	21.31	21.83	22.31	6.00	6.52	6.50	7.02	7.50
	8H	21.06	21.53	21.58	22.04	22.53	6.14	6.61	6.66	7.12	7.62
	12H	21.21	21.62	21.72	22.11	22.69	6.22	6.64	6.74	7.13	7.70
12H	4H	20.03	20.60	20.51	21.08	21.55	5.76	6.33	6.25	6.81	7.29
	6H	20.75	21.22	21.27	21.74	22.23	6.12	6.59	6.64	7.11	7.60
	8H	21.02	21.43	21.53	21.92	22.50	6.30	6.71	6.81	7.21	7.78