

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: P1055209

Luminaire Tested: S122R3DR-S485D927-X4F0-XX-UDD-F-B

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055209
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-S485D927-X4F0-XX-UDD-F-B
Description: DEFINE 2, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 2700K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

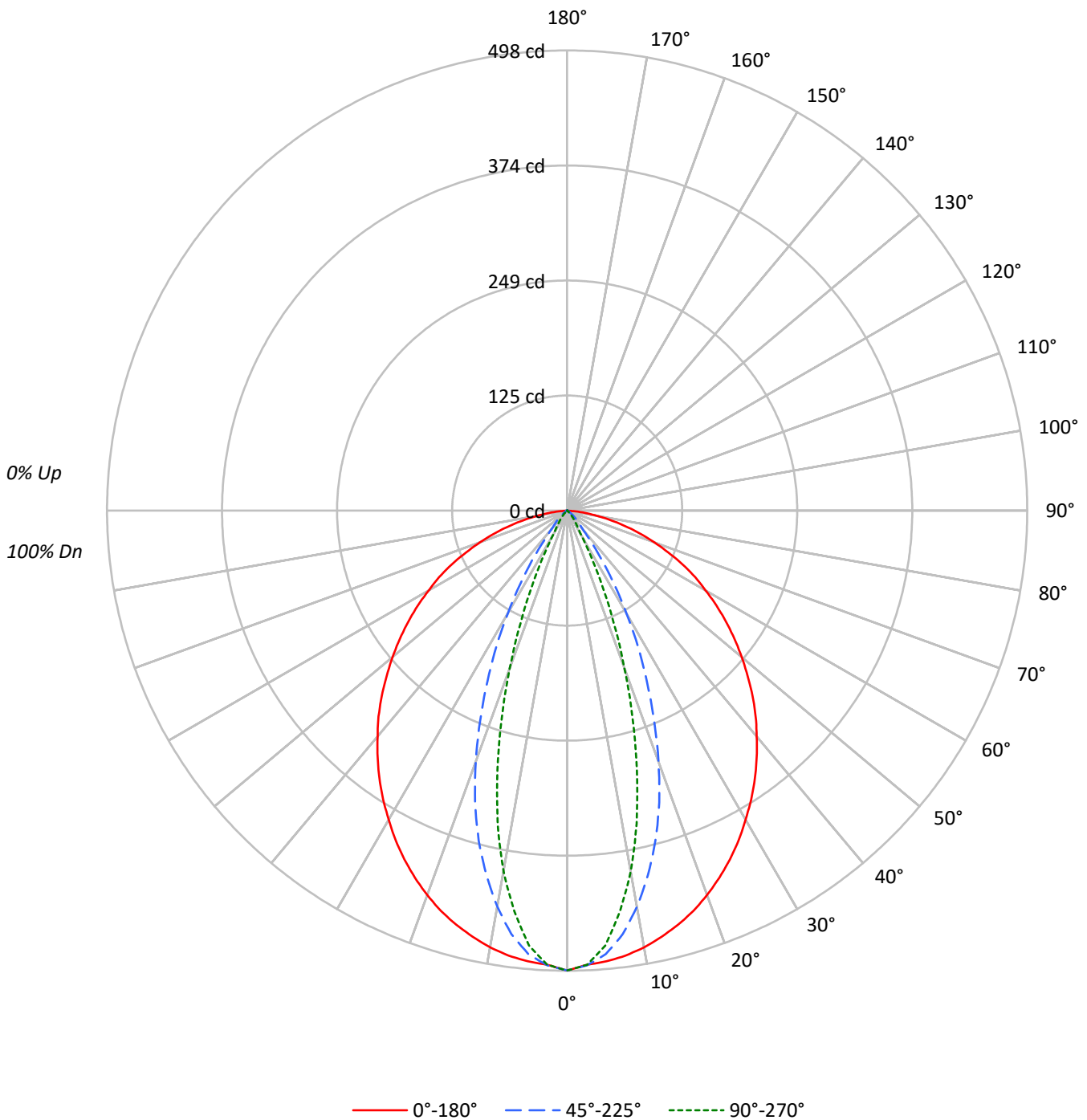
Lumens per Lamp: N/A
Luminaire Lumens: 452.8 lumens
Efficiency: N/A
Efficacy: 23.7 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 0.56 / 0.7
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 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	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°	9429	9429	9429
5°	9313	9161	8986
10°	9234	8374	7626
15°	9101	7249	5712
20°	8928	5825	3655
25°	8707	4269	1877
30°	8447	2791	613
35°	8190	1547	356
40°	7894	623	198
45°	7601	413	78
50°	7268	236	32
55°	6937	112	20
60°	6567	42	0
65°	6182	27	0
70°	5545	33	0
75°	4773	44	0
80°	3622	0	0
85°	1500	130	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 7601 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	44.6	9.9
10°-20°	103.7	22.9
20°-30°	105.3	23.2
30°-40°	79.0	17.4
40°-50°	55.3	12.2
50°-60°	33.8	7.5
60°-70°	20.2	4.5
70°-80°	9.3	2.1
80°-90°	1.7	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°	253.5	56.0
0°-40°	332.5	73.4
0°-60°	421.7	93.1
0°-90°	452.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	452.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	498	498	498	498	498	
5°	490	494	482	472	472	46
15°	464	439	370	313	291	131
25°	416	343	204	117	90	192
35°	354	230	67	20	15	221
45°	284	122	15	5	3	219
55°	210	37	3	1	1	188
65°	138	11	1	1	0	136
75°	65	1	1	1	0	69
85°	7	0	1	1	0	12
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	497.7	497.7	497.7	497.7	497.7
2.5°	492.0	499.4	492.6	491.4	492.0
5°	489.7	494.3	481.7	472.5	472.5
7.5°	485.7	485.7	462.2	443.4	437.6
10°	480.0	473.7	435.3	405.0	396.4
12.5°	472.5	457.7	403.9	361.0	347.2
15°	464.0	438.8	369.6	312.9	291.2
17.5°	454.2	417.6	331.2	260.9	235.7
20°	442.8	394.7	288.9	207.7	181.3
22.5°	430.2	369.6	246.0	160.2	132.1
25°	416.5	343.2	204.2	116.7	89.8
27.5°	402.2	315.8	165.9	80.1	54.9
30°	386.1	287.2	127.6	47.5	28.0
32.5°	370.7	259.7	95.5	25.7	20.6
35°	354.1	230.5	66.9	20.0	15.4
37.5°	337.0	203.1	41.2	14.9	11.4
40°	319.2	175.1	25.2	10.9	8.0
42.5°	302.1	148.7	20.0	7.4	5.1
45°	283.7	121.9	15.4	4.6	2.9
47.5°	264.9	97.3	11.4	2.9	1.7
50°	246.6	75.5	8.0	1.7	1.1
52.5°	228.3	55.5	5.1	1.1	0.6
55°	210.0	37.2	3.4	1.1	0.6
57.5°	191.6	26.3	2.3	0.6	0.6
60°	173.3	20.6	1.1	0.6	0.0
62.5°	156.2	16.0	1.1	0.6	0.6
65°	137.9	10.9	0.6	0.6	0.0
67.5°	118.4	6.9	0.6	0.6	0.0
70°	100.1	4.0	0.6	0.6	0.0
72.5°	82.4	2.3	0.6	0.6	0.0
75°	65.2	1.1	0.6	0.6	0.0
77.5°	48.6	0.6	0.0	0.6	0.0
80°	33.2	0.0	0.0	0.6	0.0
82.5°	19.5	0.0	0.0	0.6	0.0
85°	6.9	0.0	0.6	0.6	0.0
87.5°	0.0	0.0	0.6	0.6	0.0
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	14.00	15.26	14.37	15.58	15.89	0.00	0.00	0.00	0.00	0.00
	3H	17.75	18.87	18.13	19.20	19.56	0.00	0.00	0.00	0.00	0.00
	4H	19.06	20.10	19.46	20.45	20.83	0.00	0.00	0.00	0.00	0.00
	6H	19.91	20.87	20.33	21.24	21.63	0.00	0.00	0.00	0.00	0.00
	8H	20.13	21.03	20.56	21.42	21.83	0.00	0.00	0.00	0.00	0.00
	12H	20.19	21.06	20.63	21.44	21.87	0.00	0.00	0.00	0.00	0.00
4H	2H	13.76	14.80	14.16	15.15	15.53	0.00	0.00	0.00	0.00	0.00
	3H	17.50	18.35	17.92	18.76	19.16	0.00	0.00	0.00	0.00	0.00
	4H	18.80	19.56	19.23	19.98	20.42	0.00	0.00	0.00	0.00	0.00
	6H	19.72	20.37	20.18	20.82	21.29	0.00	0.00	0.00	0.00	0.00
	8H	19.98	20.59	20.45	21.04	21.51	0.00	0.00	0.00	0.00	0.00
	12H	20.08	20.62	20.57	21.10	21.58	0.00	0.00	0.00	0.00	0.00
8H	4H	18.65	19.26	19.12	19.71	20.18	0.00	0.00	0.00	0.00	0.00
	6H	19.55	20.05	20.06	20.55	21.03	0.00	0.00	0.00	0.00	0.00
	8H	19.81	20.26	20.34	20.77	21.27	0.00	0.00	0.00	0.00	0.00
	12H	19.93	20.32	20.45	20.82	21.39	0.00	0.00	0.00	0.00	0.00
12H	4H	18.60	19.14	19.09	19.63	20.10	0.00	0.00	0.00	0.00	0.00
	6H	19.49	19.93	20.01	20.45	20.94	0.00	0.00	0.00	0.00	0.00
	8H	19.77	20.16	20.28	20.65	21.23	0.00	0.00	0.00	0.00	0.00