

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: P1055342

Luminaire Tested: S122R3DR-H485D850-X4F0-XX-UDD-F-S

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055342
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-H485D850-X4F0-XX-UDD-F-S
Description: DEFINE 2, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 5000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

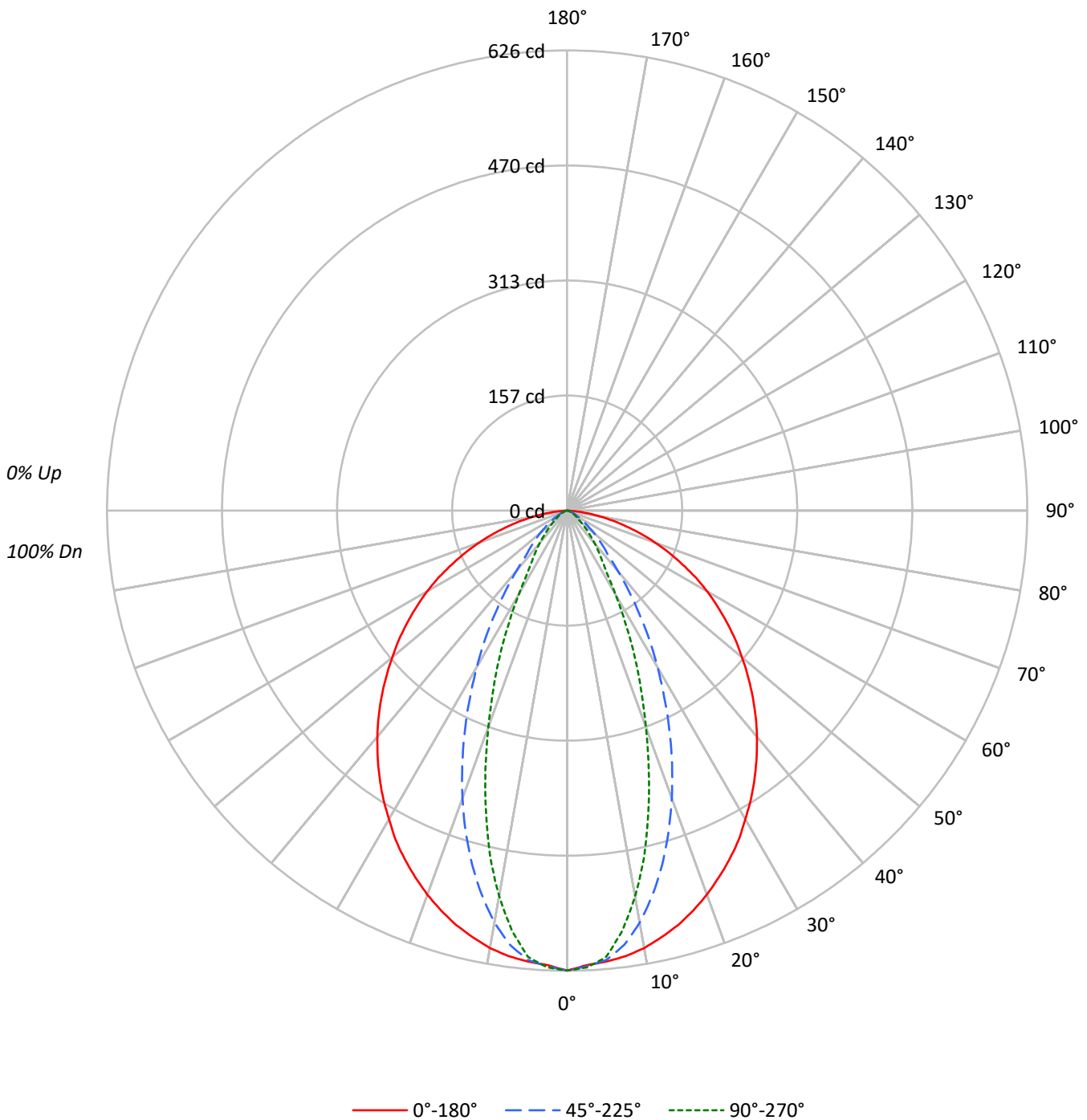
Lumens per Lamp: N/A
Luminaire Lumens: 717.1 lumens
Efficiency: N/A
Efficacy: 41.5 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 0.64 / 0.81
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 17.3
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°	11854	11854	11854
5°	11711	11668	11594
10°	11626	10946	10252
15°	11445	9791	8363
20°	11208	8395	6309
25°	10933	6878	4505
30°	10601	5369	2868
35°	10288	3936	1915
40°	9937	2656	1442
45°	9555	1870	1026
50°	9155	1424	722
55°	8763	988	532
60°	8340	667	436
65°	7733	480	345
70°	7052	382	299
75°	6120	337	227
80°	4855	251	251
85°	2674	326	174

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 9555 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	57.2	8.0
10°-20°	140.4	19.6
20°-30°	160.4	22.4
30°-40°	136.0	19.0
40°-50°	101.5	14.2
50°-60°	65.6	9.1
60°-70°	36.6	5.1
70°-80°	16.1	2.2
80°-90°	3.3	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°	358.0	49.9
0°-40°	494.1	68.9
0°-60°	661.1	92.2
0°-90°	717.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	717.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	626	626	626	626	626	
5°	616	623	614	607	610	58
15°	584	569	499	446	426	164
25°	523	462	329	241	216	241
35°	445	335	170	93	83	278
45°	357	212	70	45	38	275
55°	265	100	30	18	16	237
65°	172	37	11	8	8	172
75°	84	8	5	4	3	89
85°	12	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°	625.7	625.7	625.7	625.7	625.7
2.5°	618.8	628.0	620.4	620.4	621.9
5°	615.8	623.4	613.5	607.3	609.6
7.5°	611.2	616.5	595.8	577.4	575.9
10°	604.3	606.6	569.0	540.6	532.9
12.5°	594.3	588.9	536.0	496.1	483.1
15°	583.5	569.0	499.2	446.3	426.4
17.5°	570.5	544.4	458.6	394.1	369.6
20°	555.9	519.1	416.4	339.7	312.9
22.5°	539.8	490.8	372.7	288.3	261.5
25°	523.0	461.6	329.0	240.8	215.5
27.5°	505.3	431.0	286.0	197.8	170.2
30°	484.6	399.5	245.4	156.4	131.1
32.5°	465.5	366.5	207.8	121.2	99.7
35°	444.8	335.1	170.2	92.8	82.8
37.5°	423.3	303.7	137.3	78.2	69.8
40°	401.8	272.2	107.4	65.9	58.3
42.5°	379.6	241.5	82.8	55.2	47.5
45°	356.6	211.6	69.8	45.2	38.3
47.5°	333.6	181.7	58.3	36.0	30.7
50°	310.6	153.4	48.3	28.4	24.5
52.5°	288.3	126.5	38.3	23.0	19.9
55°	265.3	100.5	29.9	18.4	16.1
57.5°	242.3	78.2	23.0	15.3	13.8
60°	220.1	59.0	17.6	12.3	11.5
62.5°	197.1	47.5	13.8	10.0	9.2
65°	172.5	36.8	10.7	8.4	7.7
67.5°	150.3	26.8	8.4	6.9	6.1
70°	127.3	18.4	6.9	6.1	5.4
72.5°	105.1	11.5	5.4	4.6	4.6
75°	83.6	7.7	4.6	3.8	3.1
77.5°	63.6	4.6	3.1	3.1	2.3
80°	44.5	3.1	2.3	2.3	2.3
82.5°	27.6	2.3	1.5	1.5	1.5
85°	12.3	0.8	1.5	0.8	0.8
87.5°	2.3	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	16.84	18.16	17.21	18.47	18.79	3.14	4.46	3.51	4.77	5.09
	3H	19.31	20.48	19.69	20.81	21.18	3.99	5.16	4.37	5.49	5.86
	4H	20.27	21.36	20.67	21.71	22.09	4.27	5.36	4.67	5.71	6.09
	6H	20.96	21.96	21.37	22.33	22.72	4.46	5.46	4.88	5.83	6.23
	8H	21.15	22.10	21.58	22.49	22.90	4.53	5.48	4.96	5.87	6.28
	12H	21.23	22.14	21.67	22.52	22.95	4.56	5.47	4.99	5.85	6.28
4H	2H	16.63	17.72	17.03	18.07	18.45	3.71	4.80	4.11	5.15	5.54
	3H	19.11	20.01	19.52	20.41	20.81	4.74	5.64	5.16	6.04	6.45
	4H	20.06	20.86	20.49	21.27	21.72	5.11	5.91	5.55	6.33	6.77
	6H	20.81	21.50	21.27	21.95	22.41	5.41	6.10	5.87	6.54	7.01
	8H	21.05	21.70	21.52	22.14	22.62	5.50	6.15	5.97	6.59	7.06
	12H	21.18	21.75	21.67	22.23	22.71	5.55	6.12	6.03	6.60	7.07
8H	4H	19.92	20.57	20.39	21.01	21.49	5.49	6.13	5.96	6.58	7.05
	6H	20.66	21.19	21.16	21.68	22.16	5.85	6.37	6.35	6.87	7.35
	8H	20.91	21.38	21.43	21.89	22.38	5.98	6.45	6.51	6.97	7.46
	12H	21.06	21.47	21.57	21.97	22.54	6.07	6.48	6.59	6.98	7.55
12H	4H	19.88	20.45	20.36	20.93	21.40	5.61	6.18	6.10	6.66	7.13
	6H	20.60	21.07	21.12	21.59	22.08	5.97	6.44	6.49	6.96	7.45
	8H	20.87	21.28	21.38	21.77	22.35	6.14	6.56	6.66	7.05	7.62