

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: P1055336

Luminaire Tested: S122R3DR-H485D835-X4F0-XX-UDD-F-S

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055336
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-H485D835-X4F0-XX-UDD-F-S
Description: DEFINE 2, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

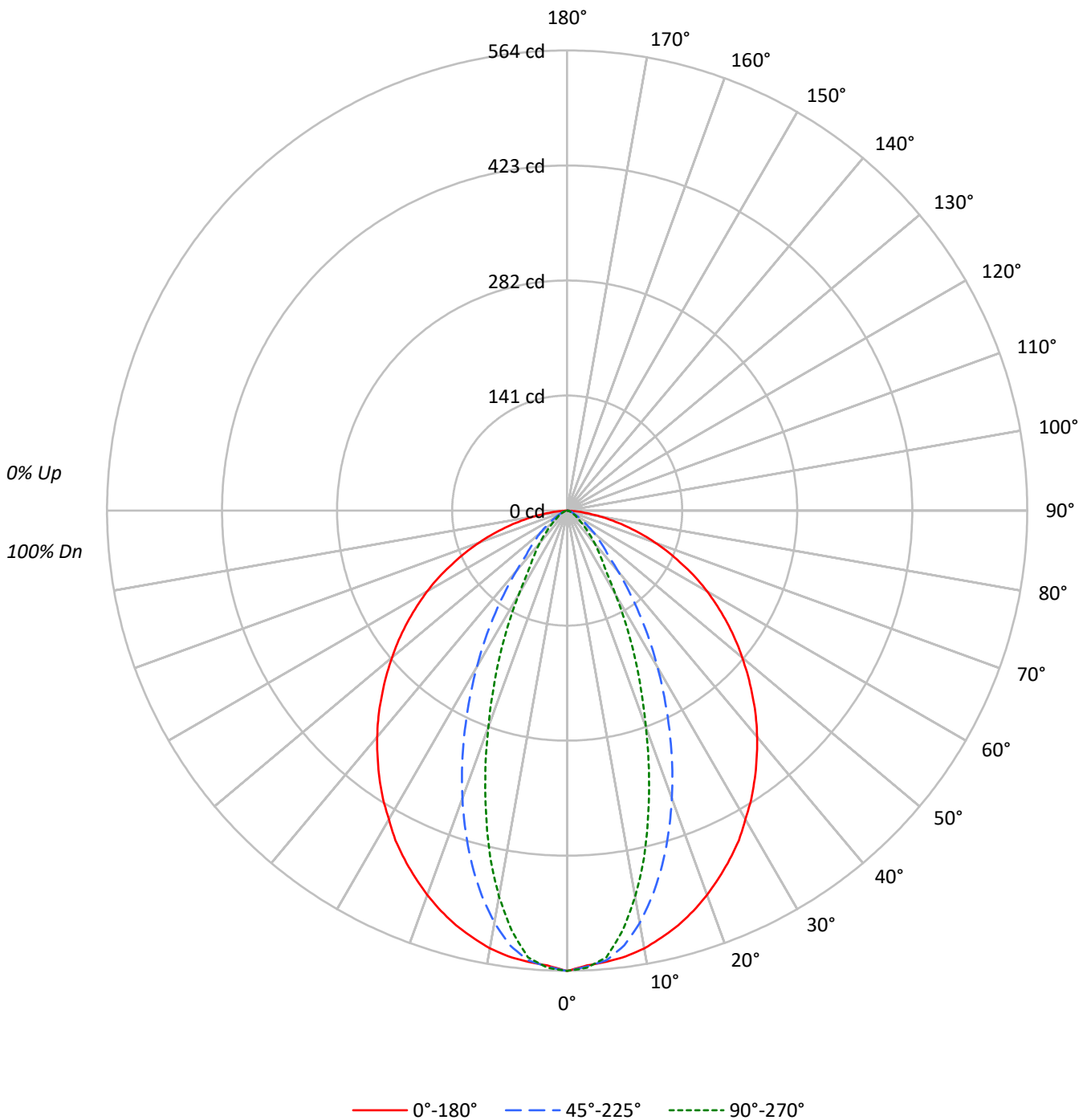
Lumens per Lamp: N/A
Luminaire Lumens: 646.6 lumens
Efficiency: N/A
Efficacy: 37.4 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 0.64 / 0.81
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

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°	10689	10689	10689
5°	10559	10521	10454
10°	10483	9871	9246
15°	10321	8828	7540
20°	10107	7571	5688
25°	9859	6200	4062
30°	9560	4841	2586
35°	9275	3550	1728
40°	8960	2394	1301
45°	8614	1685	927
50°	8253	1285	651
55°	7901	892	479
60°	7518	602	394
65°	6976	435	309
70°	6359	343	266
75°	5519	300	205
80°	4375	229	229
85°	2413	304	152

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 8614 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	51.6	8.0
10°-20°	126.6	19.6
20°-30°	144.6	22.4
30°-40°	122.7	19.0
40°-50°	91.5	14.2
50°-60°	59.1	9.1
60°-70°	33.0	5.1
70°-80°	14.5	2.2
80°-90°	3.0	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°	322.8	49.9
0°-40°	445.5	68.9
0°-60°	596.2	92.2
0°-90°	646.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	646.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	564	564	564	564	564	
5°	555	562	553	548	550	53
15°	526	513	450	402	384	148
25°	472	416	297	217	194	217
35°	401	302	154	84	75	251
45°	322	191	63	41	35	248
55°	239	91	27	17	14	214
65°	156	33	10	8	7	155
75°	75	7	4	4	3	80
85°	11	1	1	1	1	16
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	564.2	564.2	564.2	564.2	564.2
2.5°	558.0	566.3	559.4	559.4	560.8
5°	555.2	562.1	553.2	547.6	549.7
7.5°	551.1	555.9	537.3	520.7	519.3
10°	544.9	546.9	513.1	487.5	480.6
12.5°	535.9	531.0	483.3	447.4	435.6
15°	526.2	513.1	450.1	402.4	384.4
17.5°	514.4	490.9	413.5	355.4	333.3
20°	501.3	468.1	375.5	306.3	282.1
22.5°	486.8	442.5	336.0	260.0	235.8
25°	471.6	416.3	296.6	217.1	194.3
27.5°	455.7	388.6	257.9	178.4	153.5
30°	437.0	360.2	221.3	141.1	118.2
32.5°	419.7	330.5	187.4	109.2	89.9
35°	401.0	302.2	153.5	83.7	74.7
37.5°	381.7	273.8	123.8	70.5	62.9
40°	362.3	245.5	96.8	59.5	52.6
42.5°	342.3	217.8	74.7	49.8	42.9
45°	321.5	190.8	62.9	40.8	34.6
47.5°	300.8	163.9	52.6	32.5	27.7
50°	280.0	138.3	43.6	25.6	22.1
52.5°	260.0	114.1	34.6	20.7	18.0
55°	239.2	90.6	27.0	16.6	14.5
57.5°	218.5	70.5	20.7	13.8	12.4
60°	198.4	53.2	15.9	11.1	10.4
62.5°	177.7	42.9	12.4	9.0	8.3
65°	155.6	33.2	9.7	7.6	6.9
67.5°	135.5	24.2	7.6	6.2	5.5
70°	114.8	16.6	6.2	5.5	4.8
72.5°	94.7	10.4	4.8	4.1	4.1
75°	75.4	6.9	4.1	3.5	2.8
77.5°	57.4	4.1	2.8	2.8	2.1
80°	40.1	2.8	2.1	2.1	2.1
82.5°	24.9	2.1	1.4	1.4	1.4
85°	11.1	0.7	1.4	0.7	0.7
87.5°	2.1	0.7	0.7	0.7	0.7
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	16.48	17.80	16.85	18.11	18.43	2.78	4.10	3.14	4.41	4.73
	3H	18.95	20.12	19.33	20.45	20.82	3.62	4.79	4.00	5.12	5.49
	4H	19.91	21.00	20.31	21.35	21.73	3.90	4.99	4.30	5.34	5.73
	6H	20.60	21.60	21.01	21.97	22.36	4.10	5.10	4.52	5.47	5.87
	8H	20.79	21.74	21.22	22.13	22.54	4.18	5.13	4.61	5.52	5.93
	12H	20.87	21.78	21.31	22.17	22.60	4.20	5.11	4.64	5.50	5.93
4H	2H	16.27	17.36	16.67	17.71	18.09	3.36	4.45	3.76	4.80	5.18
	3H	18.75	19.65	19.16	20.05	20.45	4.38	5.27	4.79	5.68	6.08
	4H	19.69	20.50	20.13	20.91	21.36	4.75	5.55	5.19	5.97	6.42
	6H	20.45	21.14	20.91	21.59	22.05	5.06	5.75	5.52	6.19	6.66
	8H	20.69	21.34	21.16	21.79	22.26	5.16	5.80	5.63	6.25	6.72
	12H	20.82	21.39	21.31	21.87	22.35	5.21	5.78	5.69	6.26	6.73
8H	4H	19.56	20.21	20.03	20.65	21.12	5.13	5.77	5.60	6.22	6.69
	6H	20.30	20.83	20.80	21.32	21.80	5.50	6.02	6.00	6.52	7.00
	8H	20.55	21.02	21.07	21.53	22.02	5.64	6.11	6.16	6.63	7.12
	12H	20.70	21.11	21.21	21.61	22.18	5.73	6.14	6.24	6.64	7.21
12H	4H	19.52	20.09	20.00	20.57	21.04	5.25	5.82	5.74	6.30	6.77
	6H	20.24	20.71	20.76	21.23	21.72	5.62	6.09	6.14	6.61	7.10
	8H	20.51	20.92	21.02	21.41	21.99	5.80	6.22	6.32	6.71	7.28