

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: P1055349

Luminaire Tested: S122R3DR-H485D930-X4F0-XX-UDD-F-W

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055349
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-1)
Test Lab: INNOVATION CENTER
Issue Date: 7/25/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S122R3DR-H485D930-X4F0-XX-UDD-F-W
Description: DEFINE 2, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 3000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

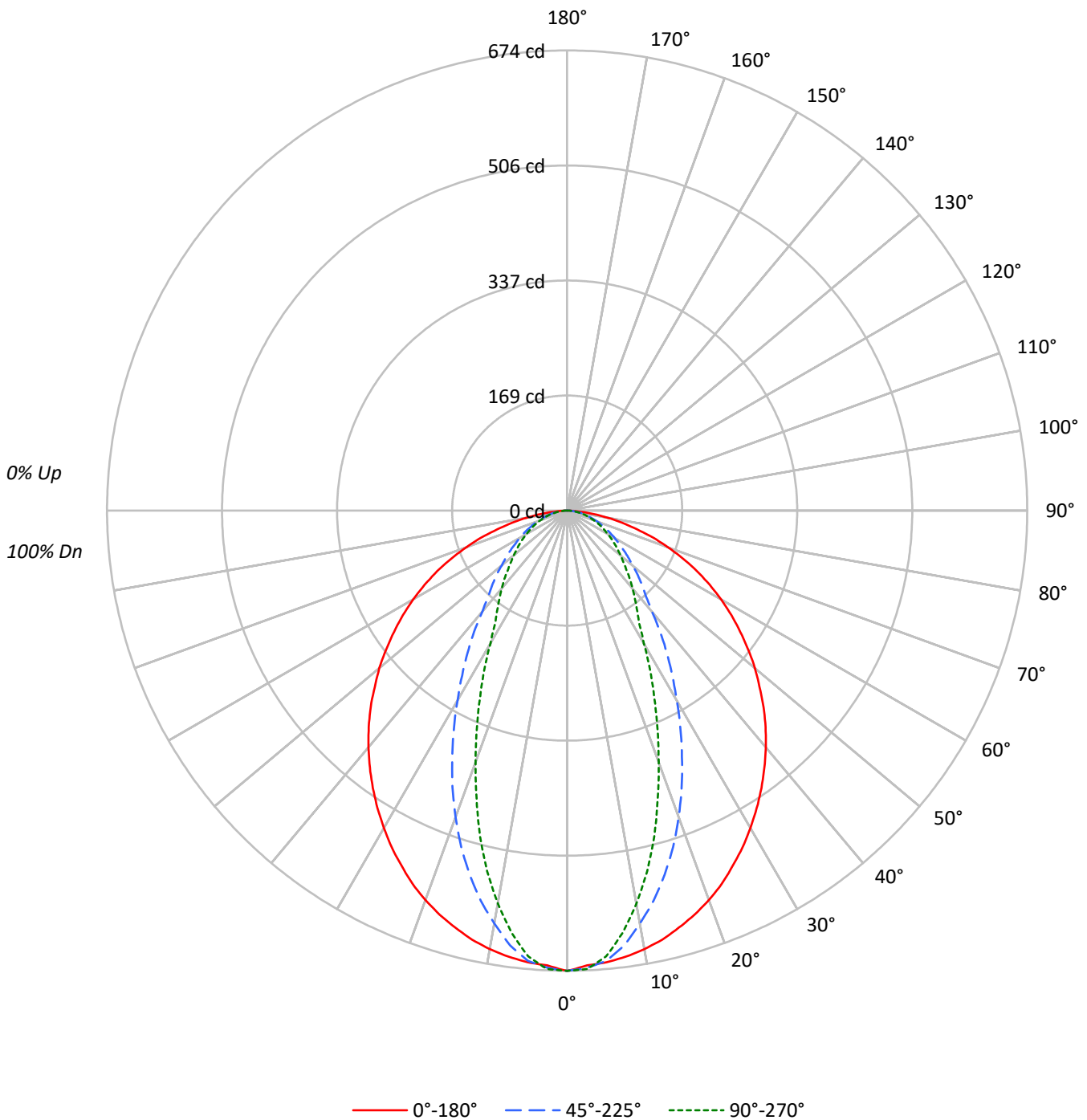
Lumens per Lamp: N/A
Luminaire Lumens: 1019.8 lumens
Efficiency: N/A
Efficacy: 58.9 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.71 / 0.9
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

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	110	106	102	99	108	104	101	97	100	97	94	96	94	92	92	91	89	87
2	102	95	89	84	99	93	87	83	89	85	81	86	82	79	83	80	77	75
3	94	85	78	72	92	83	77	71	80	75	70	78	73	69	75	71	68	66
4	87	76	69	63	85	75	68	62	73	66	61	71	65	61	68	64	60	58
5	81	69	61	55	79	68	61	55	66	60	55	64	59	54	63	58	54	52
6	75	63	55	50	74	63	55	49	61	54	49	59	53	49	58	52	48	46
7	71	58	50	45	69	58	50	45	56	49	44	55	49	44	53	48	44	42
8	66	54	46	41	65	53	46	41	52	45	40	51	45	40	50	44	40	38
9	62	50	43	37	61	49	42	37	48	42	37	47	41	37	46	41	37	35
10	59	47	39	35	58	46	39	34	45	39	34	44	38	34	43	38	34	32

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	12773	12773	12773
5°	12630	12586	12468
10°	12547	11810	11247
15°	12406	10825	9676
20°	12240	9627	7899
25°	11997	8320	6305
30°	11741	7029	4920
35°	11474	5879	4133
40°	11196	4768	3680
45°	10905	4169	3293
50°	10584	3687	3006
55°	10223	3333	2794
60°	9867	3035	2607
65°	9401	2779	2452
70°	8713	2592	2310
75°	7715	2350	2189
80°	6579	2215	2029
85°	4543	1956	1848

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 10905 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	61.8	6.1
10°-20°	156.0	15.3
20°-30°	192.2	18.8
30°-40°	184.4	18.1
40°-50°	159.1	15.6
50°-60°	123.4	12.1
60°-70°	84.5	8.3
70°-80°	45.9	4.5
80°-90°	12.6	1.2
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°	410.0	40.2
0°-40°	594.4	58.3
0°-60°	876.9	86.0
0°-90°	1019.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1019.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	674	674	674	674	674	
5°	664	674	662	653	656	63
15°	632	613	552	507	493	178
25°	574	512	398	325	302	265
35°	496	394	254	189	179	310
45°	407	274	156	128	123	314
55°	310	165	101	87	85	277
65°	210	90	62	56	55	207
75°	105	41	32	30	30	113
85°	21	10	9	9	8	27
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	674.2	674.2	674.2	674.2	674.2
2.5°	666.9	678.2	670.3	670.3	672.0
5°	664.1	673.7	661.8	653.4	655.6
7.5°	659.0	665.8	642.1	624.1	623.5
10°	652.2	652.8	613.9	590.2	584.6
12.5°	643.8	634.8	585.2	549.6	541.2
15°	632.5	613.3	551.9	506.8	493.3
17.5°	620.7	591.4	516.4	460.0	441.4
20°	607.1	564.9	477.5	413.2	391.8
22.5°	591.9	539.5	438.6	368.1	345.6
25°	573.9	512.4	398.0	324.7	301.6
27.5°	556.4	484.8	359.1	286.4	262.7
30°	536.7	454.9	321.3	249.7	224.9
32.5°	516.9	424.5	286.4	214.8	196.2
35°	496.1	393.5	254.2	189.4	178.7
37.5°	474.7	363.0	223.8	172.5	162.9
40°	452.7	332.6	192.8	156.2	148.8
42.5°	430.1	302.7	171.4	142.6	135.9
45°	407.0	274.0	155.6	128.5	122.9
47.5°	382.2	245.2	140.4	116.7	111.6
50°	359.1	217.6	125.1	106.0	102.0
52.5°	334.3	190.5	112.7	96.4	93.0
55°	309.5	164.6	100.9	87.4	84.6
57.5°	285.3	139.8	89.6	78.9	76.7
60°	260.4	120.1	80.1	71.0	68.8
62.5°	235.1	104.3	71.0	63.7	61.4
65°	209.7	89.6	62.0	56.4	54.7
67.5°	183.2	75.5	54.1	49.6	48.5
70°	157.3	63.1	46.8	42.8	41.7
72.5°	131.9	51.3	39.5	36.6	35.5
75°	105.4	41.2	32.1	30.4	29.9
77.5°	82.3	32.1	25.9	24.8	24.2
80°	60.3	23.7	20.3	19.2	18.6
82.5°	40.0	16.3	14.7	14.1	13.5
85°	20.9	10.1	9.0	9.0	8.5
87.5°	6.8	4.5	4.5	4.5	3.9
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	18.46	19.93	18.82	20.24	20.56	13.26	14.73	13.63	15.05	15.36
	3H	20.79	22.11	21.17	22.43	22.80	14.91	16.23	15.29	16.56	16.92
	4H	21.68	22.92	22.08	23.27	23.65	15.55	16.78	15.95	17.13	17.51
	6H	22.35	23.49	22.76	23.85	24.25	16.04	17.18	16.45	17.55	17.94
	8H	22.55	23.64	22.98	24.03	24.43	16.21	17.29	16.64	17.68	18.09
	12H	22.67	23.71	23.10	24.09	24.52	16.33	17.36	16.76	17.75	18.18
4H	2H	18.48	19.71	18.88	20.06	20.44	13.98	15.21	14.38	15.56	15.94
	3H	20.89	21.91	21.30	22.31	22.71	15.83	16.85	16.24	17.25	17.65
	4H	21.82	22.74	22.25	23.16	23.60	16.57	17.50	17.01	17.91	18.35
	6H	22.60	23.40	23.05	23.84	24.30	17.19	17.99	17.65	18.43	18.89
	8H	22.87	23.61	23.33	24.06	24.53	17.40	18.15	17.87	18.60	19.07
	12H	23.04	23.71	23.53	24.19	24.66	17.57	18.23	18.05	18.71	19.19
8H	4H	21.81	22.56	22.28	23.00	23.47	16.95	17.70	17.42	18.15	18.61
	6H	22.62	23.24	23.12	23.73	24.21	17.69	18.31	18.19	18.80	19.28
	8H	22.92	23.47	23.43	23.98	24.47	17.99	18.54	18.50	19.05	19.54
	12H	23.15	23.64	23.66	24.13	24.70	18.23	18.72	18.74	19.21	19.78
12H	4H	21.79	22.46	22.27	22.94	23.41	17.01	17.68	17.49	18.16	18.63
	6H	22.59	23.15	23.11	23.66	24.15	17.78	18.33	18.29	18.84	19.33
	8H	22.93	23.42	23.44	23.91	24.47	18.13	18.62	18.64	19.11	19.68