

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: P1055340

Luminaire Tested: S122R3DR-H485D840-X4F0-XX-UDD-F-W

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055340
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-H485D840-X4F0-XX-UDD-F-W
Description: DEFINE 2, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

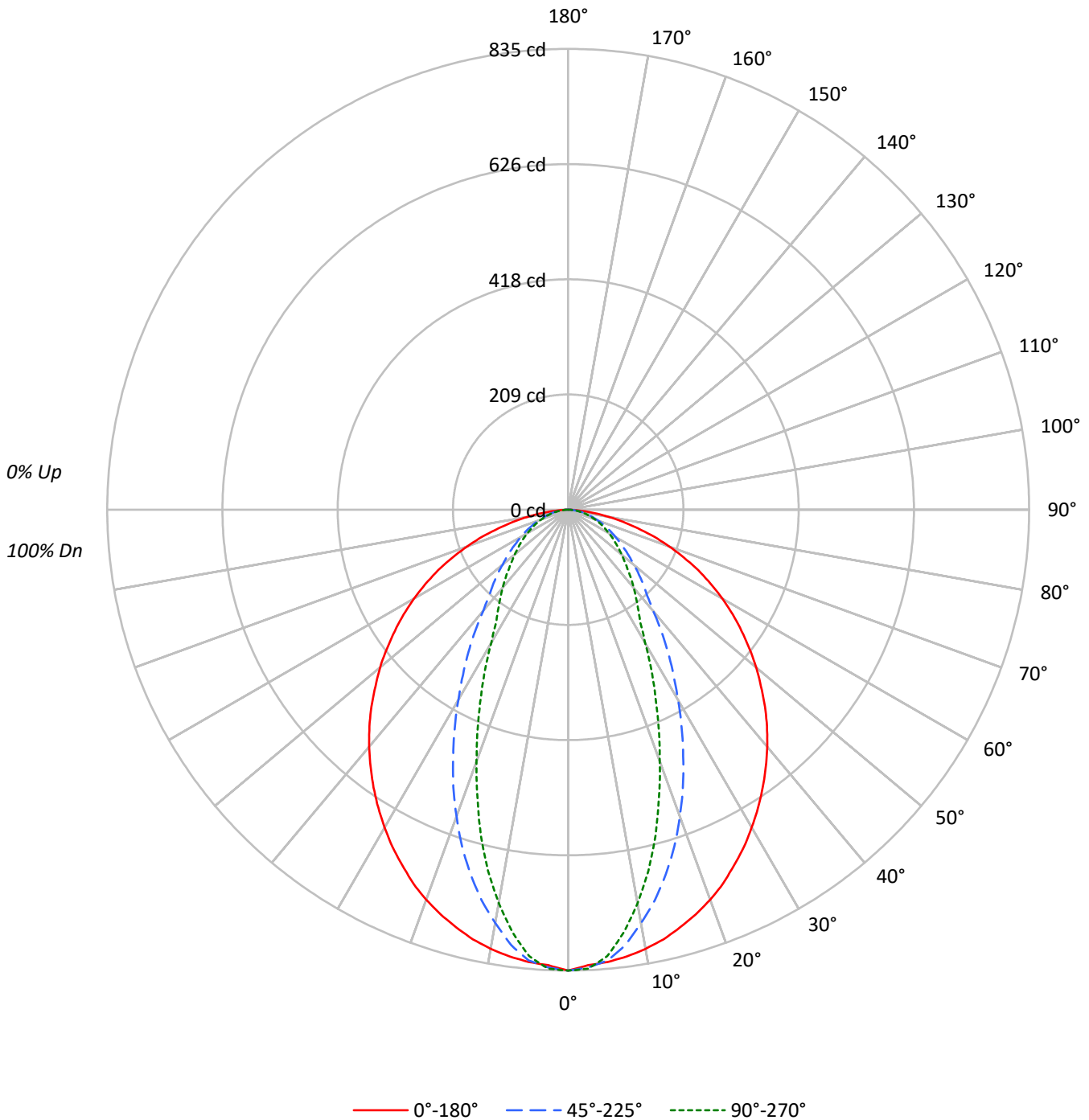
Lumens per Lamp: N/A
Luminaire Lumens: 1263.2 lumens
Efficiency: N/A
Efficacy: 73.0 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.71 / 0.9
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 17.3
Input Voltage (V): 120
Input Current (Ain): 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
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102
1	110	106	102	99	108	104	101	97	100	97	94	96	94	92	92	91	89
2	102	95	89	84	99	93	87	83	89	85	81	86	82	79	83	80	77
3	94	85	78	72	92	83	77	71	80	75	70	78	73	69	75	71	68
4	87	76	69	63	85	75	68	62	73	66	61	71	65	61	68	64	60
5	81	69	61	55	79	68	61	55	66	60	55	64	59	54	63	58	54
6	75	63	55	50	74	63	55	49	61	54	49	59	53	49	58	52	48
7	71	58	50	45	69	58	50	45	56	49	44	55	49	44	53	48	44
8	66	54	46	41	65	53	46	41	52	45	40	51	45	40	50	44	40
9	62	50	43	37	61	49	42	37	48	42	37	47	41	37	46	41	37
10	59	47	39	35	58	46	39	34	45	39	34	44	38	34	43	38	34

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	15822	15822	15822
5°	15644	15591	15445
10°	15542	14629	13930
15°	15368	13408	11984
20°	15162	11924	9784
25°	14859	10306	7810
30°	14544	8707	6095
35°	14213	7283	5121
40°	13867	5906	4558
45°	13509	5163	4078
50°	13110	4569	3726
55°	12664	4129	3458
60°	12224	3759	3228
65°	11647	3443	3035
70°	10791	3213	2864
75°	9560	2913	2708
80°	8150	2739	2509
85°	5608	2435	2282

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 13509 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	76.5	6.1
10°-20°	193.2	15.3
20°-30°	238.1	18.8
30°-40°	228.4	18.1
40°-50°	197.0	15.6
50°-60°	152.9	12.1
60°-70°	104.7	8.3
70°-80°	56.8	4.5
80°-90°	15.6	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°	507.8	40.2
0°-40°	736.2	58.3
0°-60°	1086.1	86.0
0°-90°	1263.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1263.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	835	835	835	835	835	
5°	823	834	820	809	812	78
15°	784	760	684	628	611	221
25°	711	635	493	402	374	328
35°	614	487	315	235	221	384
45°	504	339	193	159	152	389
55°	383	204	125	108	105	343
65°	260	111	77	70	68	256
75°	131	51	40	38	37	140
85°	26	13	11	11	10	33
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	835.1	835.1	835.1	835.1	835.1
2.5°	826.1	840.0	830.2	830.2	832.3
5°	822.6	834.4	819.8	809.3	812.1
7.5°	816.3	824.7	795.3	773.0	772.3
10°	807.9	808.6	760.4	731.1	724.1
12.5°	797.4	786.3	724.8	680.8	670.3
15°	783.5	759.7	683.6	627.7	611.0
17.5°	768.8	732.5	639.6	569.8	546.7
20°	752.0	699.7	591.4	511.8	485.3
22.5°	733.2	668.2	543.3	456.0	428.0
25°	710.8	634.7	493.0	402.2	373.6
27.5°	689.2	600.5	444.8	354.7	325.4
30°	664.8	563.5	398.0	309.3	278.6
32.5°	640.3	525.8	354.7	266.0	243.0
35°	614.5	487.4	314.9	234.6	221.4
37.5°	587.9	449.7	277.2	213.7	201.8
40°	560.7	412.0	238.8	193.4	184.3
42.5°	532.8	375.0	212.3	176.7	168.3
45°	504.2	339.4	192.7	159.2	152.2
47.5°	473.4	303.7	173.9	144.5	138.3
50°	444.8	269.5	155.0	131.3	126.4
52.5°	414.1	236.0	139.7	119.4	115.2
55°	383.4	203.9	125.0	108.2	104.7
57.5°	353.3	173.2	111.0	97.8	95.0
60°	322.6	148.7	99.2	88.0	85.2
62.5°	291.2	129.2	88.0	78.9	76.1
65°	259.8	111.0	76.8	69.8	67.7
67.5°	226.9	93.6	67.0	61.4	60.1
70°	194.8	78.2	58.0	53.1	51.7
72.5°	163.4	63.5	48.9	45.4	44.0
75°	130.6	51.0	39.8	37.7	37.0
77.5°	101.9	39.8	32.1	30.7	30.0
80°	74.7	29.3	25.1	23.7	23.0
82.5°	49.6	20.2	18.2	17.5	16.8
85°	25.8	12.6	11.2	11.2	10.5
87.5°	8.4	5.6	5.6	5.6	4.9
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	19.20	20.67	19.57	20.99	21.30	14.01	15.48	14.38	15.79	16.11
	3H	21.53	22.85	21.91	23.18	23.54	15.66	16.98	16.04	17.30	17.67
	4H	22.43	23.66	22.83	24.01	24.39	16.29	17.53	16.69	17.88	18.26
	6H	23.09	24.23	23.50	24.60	24.99	16.79	17.93	17.20	18.29	18.69
	8H	23.30	24.38	23.73	24.77	25.17	16.96	18.04	17.38	18.43	18.83
	12H	23.41	24.45	23.84	24.83	25.26	17.07	18.11	17.50	18.49	18.92
4H	2H	19.22	20.45	19.62	20.80	21.18	14.73	15.96	15.13	16.31	16.69
	3H	21.63	22.66	22.04	23.06	23.46	16.57	17.60	16.99	18.00	18.40
	4H	22.56	23.48	22.99	23.90	24.34	17.32	18.24	17.75	18.66	19.10
	6H	23.34	24.14	23.80	24.58	25.04	17.93	18.74	18.39	19.18	19.64
	8H	23.61	24.36	24.07	24.80	25.27	18.15	18.90	18.62	19.34	19.81
	12H	23.79	24.45	24.27	24.93	25.41	18.31	18.98	18.80	19.46	19.93
8H	4H	22.55	23.30	23.02	23.75	24.22	17.70	18.45	18.16	18.89	19.36
	6H	23.36	23.98	23.86	24.47	24.95	18.44	19.05	18.93	19.55	20.02
	8H	23.66	24.22	24.18	24.73	25.22	18.73	19.29	19.25	19.80	20.29
	12H	23.89	24.38	24.40	24.87	25.44	18.98	19.47	19.49	19.96	20.52
12H	4H	22.53	23.20	23.02	23.68	24.15	17.76	18.42	18.24	18.90	19.38
	6H	23.34	23.89	23.85	24.40	24.89	18.52	19.08	19.04	19.59	20.08
	8H	23.67	24.16	24.18	24.65	25.22	18.88	19.37	19.39	19.86	20.43