

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: P1055358

Luminaire Tested: S122R3DR-H485D950-X4F0-XX-UDD-F-W

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055358
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-H485D950-X4F0-XX-UDD-F-W
Description: DEFINE 2, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 5000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

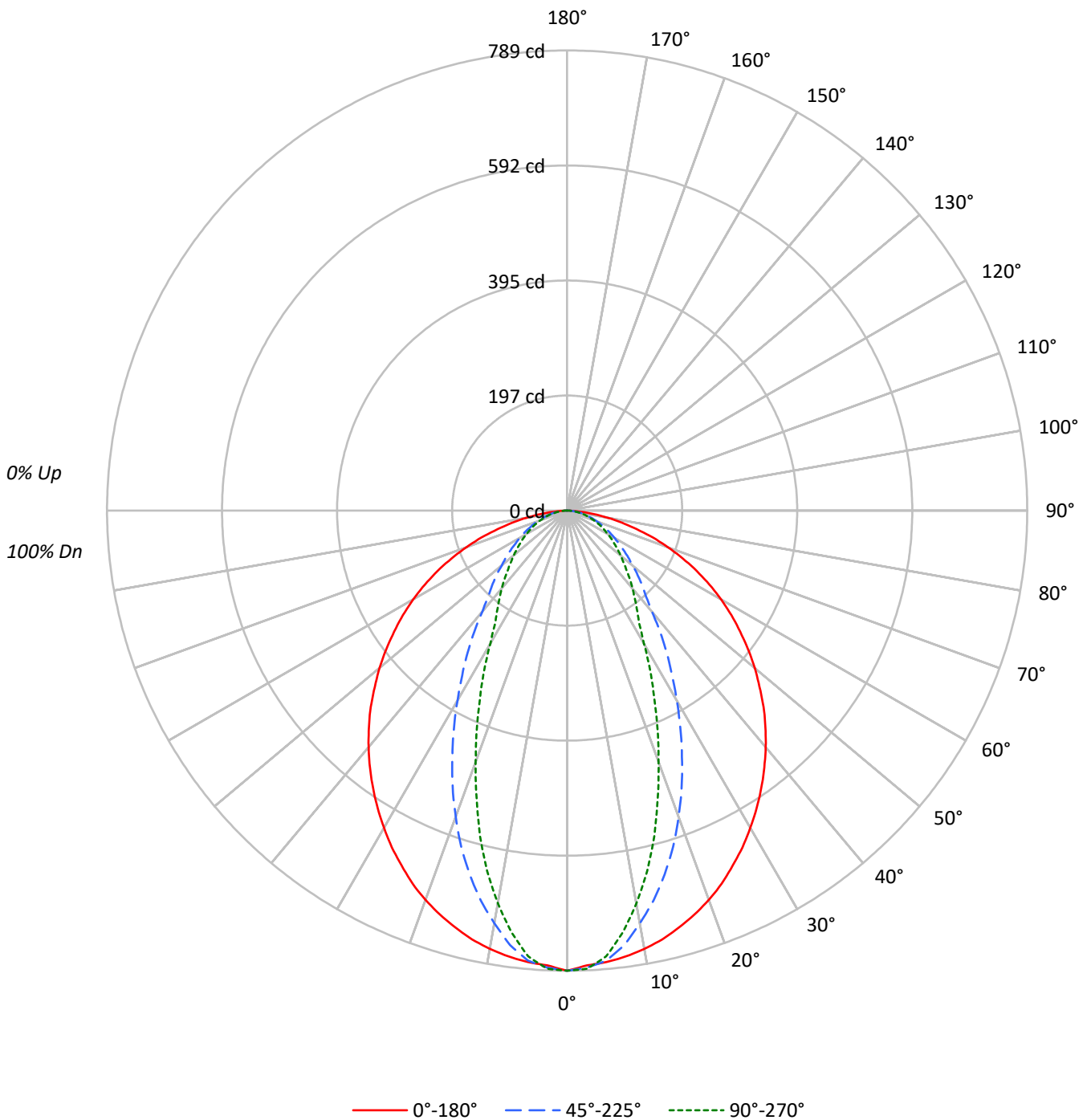
Lumens per Lamp: N/A
Luminaire Lumens: 1193.3 lumens
Efficiency: N/A
Efficacy: 69.0 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.71 / 0.9
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 17.3
Input Voltage (V): 120
Input Current (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°	14946	14946	14946
5°	14779	14728	14591
10°	14683	13821	13161
15°	14516	12667	11321
20°	14323	11264	9244
25°	14037	9735	7377
30°	13739	8226	5758
35°	13426	6881	4836
40°	13101	5580	4306
45°	12762	4879	3853
50°	12385	4315	3519
55°	11961	3901	3267
60°	11549	3550	3050
65°	11001	3255	2869
70°	10192	3036	2703
75°	9033	2752	2562
80°	7703	2586	2378
85°	5304	2304	2152

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 12762 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	72.3	6.1
10°-20°	182.5	15.3
20°-30°	224.9	18.8
30°-40°	215.8	18.1
40°-50°	186.1	15.6
50°-60°	144.4	12.1
60°-70°	98.9	8.3
70°-80°	53.7	4.5
80°-90°	14.7	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°	479.7	40.2
0°-40°	695.5	58.3
0°-60°	1026.0	86.0
0°-90°	1193.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1193.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	789	789	789	789	789	
5°	777	788	774	764	767	74
15°	740	718	646	593	577	209
25°	672	600	466	380	353	310
35°	580	460	298	222	209	363
45°	476	321	182	150	144	367
55°	362	193	118	102	99	324
65°	245	105	73	66	64	242
75°	123	48	38	36	35	132
85°	24	12	11	11	10	31
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	788.9	788.9	788.9	788.9	788.9
2.5°	780.4	793.6	784.3	784.3	786.3
5°	777.1	788.3	774.4	764.5	767.2
7.5°	771.1	779.0	751.3	730.2	729.6
10°	763.2	763.9	718.4	690.6	684.1
12.5°	753.3	742.8	684.7	643.2	633.3
15°	740.1	717.7	645.8	593.0	577.2
17.5°	726.3	692.0	604.2	538.3	516.5
20°	710.4	661.0	558.7	483.5	458.5
22.5°	692.6	631.3	513.2	430.7	404.4
25°	671.5	599.6	465.7	380.0	352.9
27.5°	651.1	567.3	420.2	335.1	307.4
30°	628.0	532.3	376.0	292.2	263.2
32.5°	604.9	496.7	335.1	251.3	229.6
35°	580.5	460.4	297.5	221.6	209.1
37.5°	555.4	424.8	261.9	201.9	190.6
40°	529.7	389.2	225.6	182.7	174.1
42.5°	503.3	354.2	200.5	166.9	159.0
45°	476.3	320.6	182.1	150.4	143.8
47.5°	447.2	286.9	164.3	136.5	130.6
50°	420.2	254.6	146.4	124.0	119.4
52.5°	391.2	223.0	131.9	112.8	108.8
55°	362.1	192.6	118.1	102.2	98.9
57.5°	333.8	163.6	104.9	92.4	89.7
60°	304.8	140.5	93.7	83.1	80.5
62.5°	275.1	122.0	83.1	74.5	71.9
65°	245.4	104.9	72.6	66.0	64.0
67.5°	214.4	88.4	63.3	58.0	56.7
70°	184.0	73.9	54.8	50.1	48.8
72.5°	154.4	60.0	46.2	42.9	41.6
75°	123.4	48.2	37.6	35.6	35.0
77.5°	96.3	37.6	30.3	29.0	28.4
80°	70.6	27.7	23.7	22.4	21.8
82.5°	46.8	19.1	17.2	16.5	15.8
85°	24.4	11.9	10.6	10.6	9.9
87.5°	7.9	5.3	5.3	5.3	4.6
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	19.01	20.47	19.37	20.79	21.10	13.81	15.28	14.18	15.59	15.91
	3H	21.33	22.65	21.71	22.98	23.34	15.46	16.78	15.84	17.10	17.47
	4H	22.23	23.47	22.63	23.81	24.19	16.09	17.33	16.49	17.68	18.06
	6H	22.89	24.03	23.31	24.40	24.79	16.59	17.73	17.00	18.10	18.49
	8H	23.10	24.19	23.53	24.58	24.98	16.76	17.84	17.19	18.23	18.63
	12H	23.22	24.25	23.65	24.64	25.07	16.87	17.91	17.31	18.29	18.72
4H	2H	19.02	20.26	19.42	20.61	20.99	14.53	15.76	14.93	16.11	16.49
	3H	21.43	22.46	21.84	22.86	23.26	16.37	17.40	16.79	17.80	18.20
	4H	22.36	23.29	22.80	23.70	24.14	17.12	18.04	17.56	18.46	18.90
	6H	23.14	23.94	23.60	24.39	24.85	17.74	18.54	18.20	18.98	19.44
	8H	23.41	24.16	23.88	24.61	25.07	17.95	18.70	18.42	19.15	19.62
	12H	23.59	24.26	24.07	24.74	25.21	18.11	18.78	18.60	19.26	19.73
8H	4H	22.36	23.11	22.82	23.55	24.02	17.50	18.25	17.96	18.69	19.16
	6H	23.16	23.78	23.66	24.27	24.75	18.24	18.86	18.74	19.35	19.83
	8H	23.47	24.02	23.98	24.53	25.02	18.53	19.09	19.05	19.60	20.09
	12H	23.70	24.19	24.21	24.68	25.24	18.78	19.27	19.29	19.76	20.33
12H	4H	22.34	23.01	22.82	23.49	23.96	17.56	18.23	18.04	18.71	19.18
	6H	23.14	23.70	23.66	24.21	24.69	18.32	18.88	18.84	19.39	19.88
	8H	23.47	23.96	23.98	24.46	25.02	18.68	19.17	19.19	19.66	20.23