

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: P1055205

Luminaire Tested: S122R3DR-S485D840-X4F0-XX-UDD-F-W

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055205
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-S485D840-X4F0-XX-UDD-F-W
Description: DEFINE 2, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

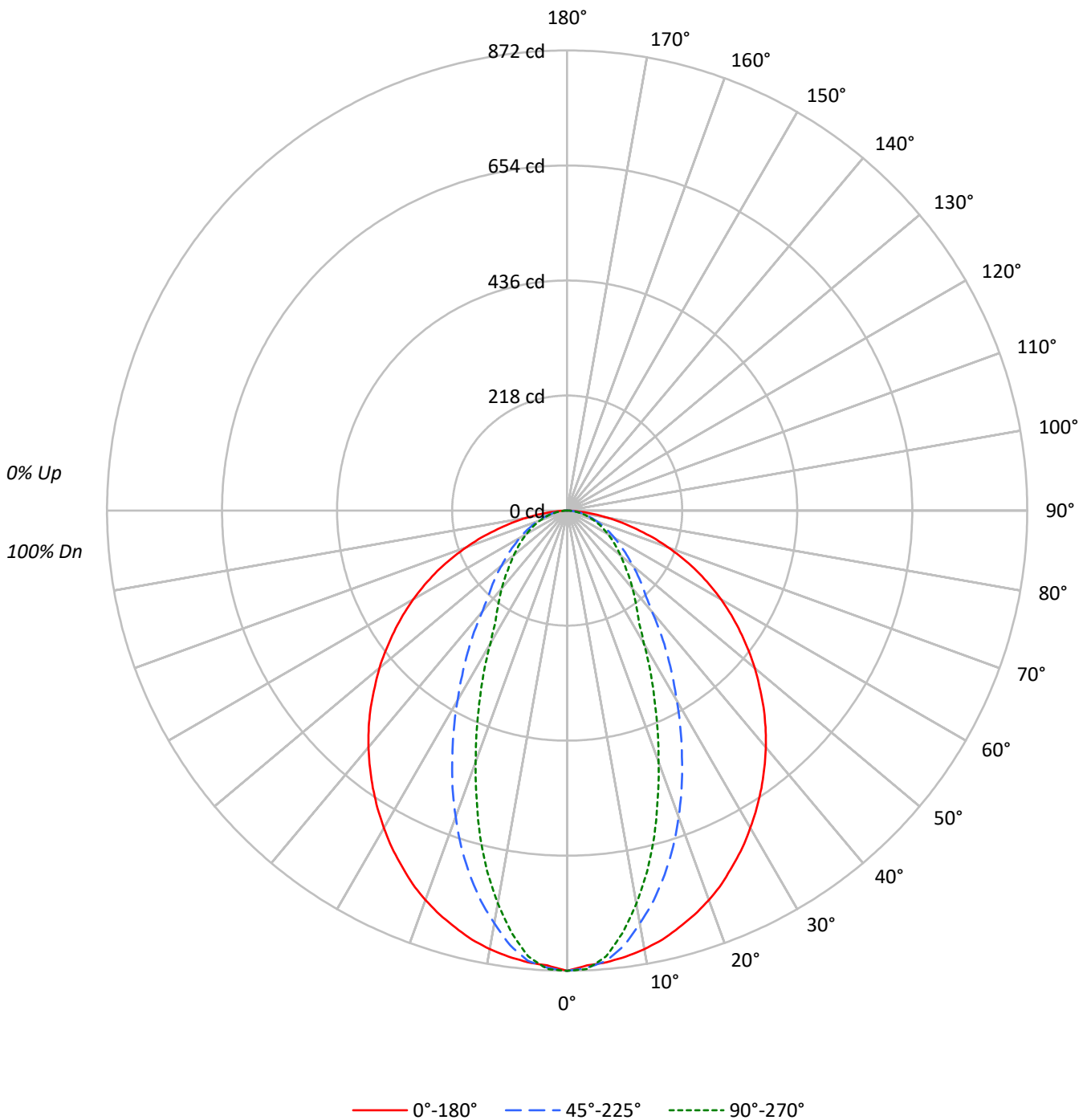
Lumens per Lamp: N/A
Luminaire Lumens: 1319.3 lumens
Efficiency: N/A
Efficacy: 69.1 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.71 / 0.9
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 19.1
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°	16525	16525	16525
5°	16339	16283	16129
10°	16233	15279	14550
15°	16048	14005	12516
20°	15835	12454	10218
25°	15519	10764	8157
30°	15189	9094	6366
35°	14844	7607	5347
40°	14483	6168	4761
45°	14107	5394	4260
50°	13691	4772	3891
55°	13226	4311	3614
60°	12766	3926	3372
65°	12162	3595	3169
70°	11273	3351	2991
75°	9985	3045	2833
80°	8510	2869	2629
85°	5869	2543	2369

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 14107 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	79.9	6.1
10°-20°	201.8	15.3
20°-30°	248.7	18.8
30°-40°	238.6	18.1
40°-50°	205.8	15.6
50°-60°	159.6	12.1
60°-70°	109.3	8.3
70°-80°	59.4	4.5
80°-90°	16.3	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°	530.4	40.2
0°-40°	768.9	58.3
0°-60°	1134.3	86.0
0°-90°	1319.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1319.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	872	872	872	872	872	
5°	859	872	856	845	848	82
15°	818	793	714	656	638	231
25°	742	663	515	420	390	342
35°	642	509	329	245	231	401
45°	526	354	201	166	159	406
55°	400	213	130	113	109	358
65°	271	116	80	73	71	268
75°	136	53	42	39	39	146
85°	27	13	12	12	11	34
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	872.2	872.2	872.2	872.2	872.2
2.5°	862.7	877.3	867.1	867.1	869.3
5°	859.1	871.5	856.2	845.2	848.1
7.5°	852.5	861.3	830.6	807.3	806.6
10°	843.8	844.5	794.2	763.5	756.3
12.5°	832.8	821.2	757.0	711.0	700.1
15°	818.2	793.4	714.0	655.6	638.1
17.5°	802.9	765.0	668.0	595.1	571.0
20°	785.4	730.7	617.7	534.6	506.8
22.5°	765.7	697.9	567.4	476.2	447.0
25°	742.4	662.9	514.9	420.1	390.2
27.5°	719.8	627.2	464.5	370.5	339.8
30°	694.3	588.5	415.7	323.1	291.0
32.5°	668.7	549.1	370.5	277.9	253.8
35°	641.8	509.0	328.9	245.0	231.2
37.5°	614.0	469.6	289.5	223.2	210.8
40°	585.6	430.3	249.4	202.0	192.5
42.5°	556.4	391.6	221.7	184.5	175.8
45°	526.5	354.4	201.3	166.3	159.0
47.5°	494.4	317.2	181.6	151.0	144.4
50°	464.5	281.5	161.9	137.1	132.0
52.5°	432.5	246.5	145.9	124.7	120.3
55°	400.4	212.9	130.5	113.0	109.4
57.5°	369.0	180.9	116.0	102.1	99.2
60°	336.9	155.3	103.6	91.9	89.0
62.5°	304.1	134.9	91.9	82.4	79.5
65°	271.3	116.0	80.2	72.9	70.7
67.5°	237.0	97.7	70.0	64.2	62.7
70°	203.5	81.7	60.5	55.4	54.0
72.5°	170.6	66.4	51.0	47.4	45.9
75°	136.4	53.2	41.6	39.4	38.7
77.5°	106.5	41.6	33.5	32.1	31.4
80°	78.0	30.6	26.3	24.8	24.1
82.5°	51.8	21.1	19.0	18.2	17.5
85°	27.0	13.1	11.7	11.7	10.9
87.5°	8.8	5.8	5.8	5.8	5.1
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	19.35	20.82	19.72	21.14	21.45	14.16	15.63	14.52	15.94	16.26
	3H	21.68	23.00	22.06	23.33	23.69	15.81	17.12	16.19	17.45	17.82
	4H	22.58	23.81	22.98	24.16	24.54	16.44	17.68	16.84	18.03	18.41
	6H	23.24	24.38	23.65	24.75	25.14	16.94	18.08	17.35	18.45	18.84
	8H	23.45	24.53	23.88	24.92	25.33	17.11	18.19	17.53	18.58	18.98
	12H	23.57	24.60	24.00	24.99	25.41	17.22	18.26	17.65	18.64	19.07
4H	2H	19.37	20.61	19.77	20.95	21.33	14.87	16.11	15.28	16.46	16.84
	3H	21.78	22.81	22.19	23.21	23.61	16.72	17.75	17.13	18.15	18.55
	4H	22.71	23.63	23.15	24.05	24.49	17.47	18.39	17.90	18.81	19.25
	6H	23.49	24.29	23.95	24.74	25.20	18.09	18.89	18.54	19.33	19.79
	8H	23.76	24.51	24.22	24.95	25.42	18.30	19.05	18.77	19.50	19.96
	12H	23.94	24.61	24.42	25.08	25.56	18.46	19.13	18.95	19.61	20.08
8H	4H	22.71	23.45	23.17	23.90	24.37	17.85	18.60	18.31	19.04	19.51
	6H	23.51	24.13	24.01	24.62	25.10	18.59	19.21	19.09	19.70	20.18
	8H	23.81	24.37	24.33	24.88	25.37	18.88	19.44	19.40	19.95	20.44
	12H	24.04	24.53	24.56	25.03	25.59	19.13	19.62	19.64	20.11	20.67
12H	4H	22.69	23.35	23.17	23.83	24.30	17.91	18.57	18.39	19.05	19.53
	6H	23.49	24.04	24.00	24.55	25.04	18.67	19.23	19.19	19.74	20.23
	8H	23.82	24.31	24.33	24.80	25.37	19.03	19.52	19.54	20.01	20.58