

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: P1055202

Luminaire Tested: S122R3DR-S485D835-X4F0-XX-UDD-F-W

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055202
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-S485D835-X4F0-XX-UDD-F-W
Description: DEFINE 2, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

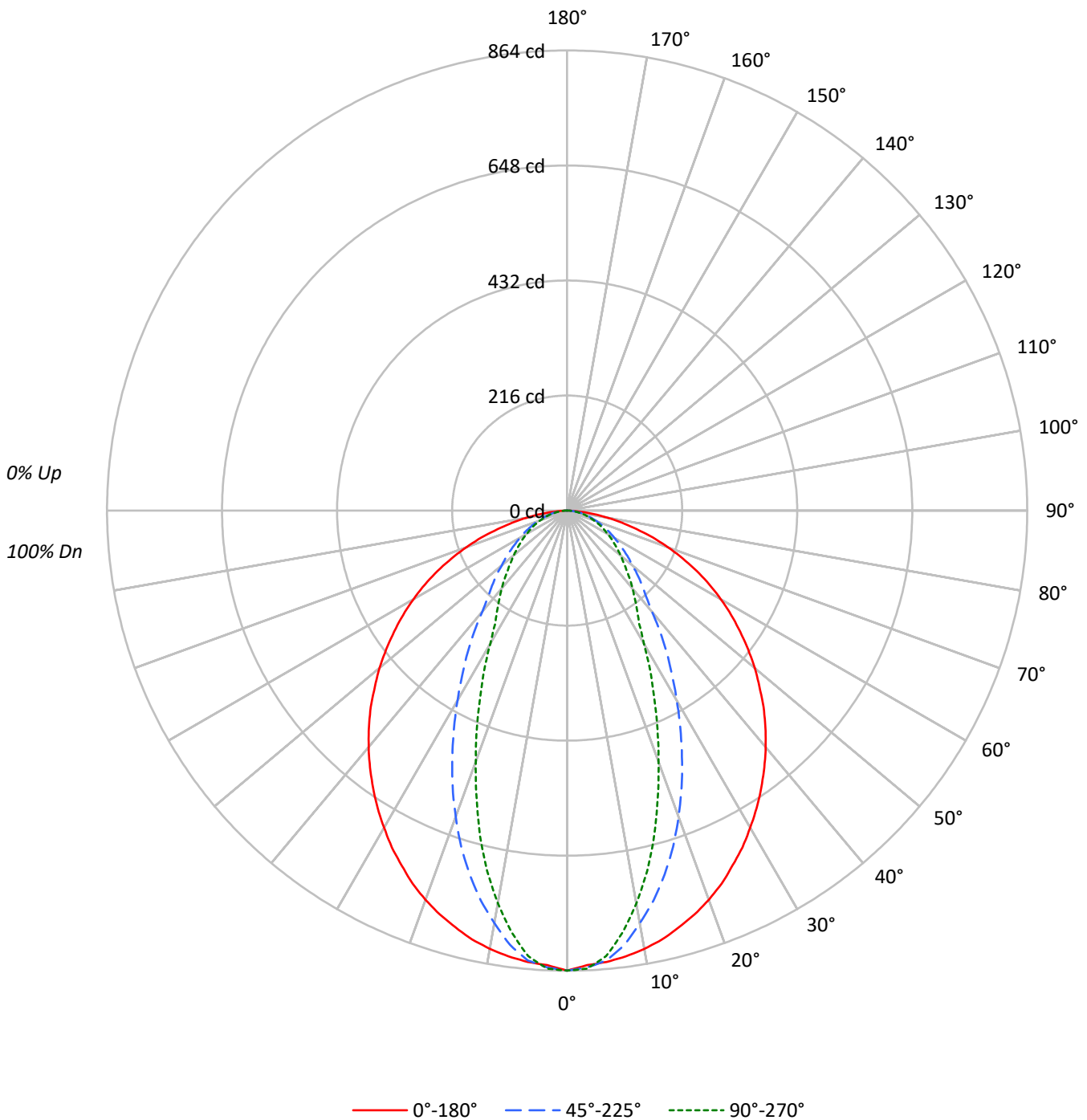
Lumens per Lamp: N/A
Luminaire Lumens: 1306.4 lumens
Efficiency: N/A
Efficacy: 68.4 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.71 / 0.9
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

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°	16364	16364	16364
5°	16179	16124	15973
10°	16073	15129	14407
15°	15891	13867	12394
20°	15680	12333	10119
25°	15367	10657	8075
30°	15040	9004	6303
35°	14698	7533	5294
40°	14342	6109	4714
45°	13970	5340	4217
50°	13558	4725	3852
55°	13097	4271	3577
60°	12641	3884	3338
65°	12041	3559	3138
70°	11162	3318	2958
75°	9882	3016	2804
80°	8434	2837	2597
85°	5804	2522	2348

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 13970 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	79.1	6.1
10°-20°	199.8	15.3
20°-30°	246.2	18.8
30°-40°	236.2	18.1
40°-50°	203.8	15.6
50°-60°	158.1	12.1
60°-70°	108.2	8.3
70°-80°	58.8	4.5
80°-90°	16.1	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°	525.2	40.2
0°-40°	761.4	58.3
0°-60°	1123.2	86.0
0°-90°	1306.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1306.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	864	864	864	864	864	
5°	851	863	848	837	840	81
15°	810	786	707	649	632	229
25°	735	656	510	416	386	339
35°	636	504	326	243	229	397
45°	521	351	199	165	157	402
55°	396	211	129	112	108	355
65°	269	115	79	72	70	265
75°	135	53	41	39	38	145
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°	863.7	863.7	863.7	863.7	863.7
2.5°	854.3	868.7	858.6	858.6	860.8
5°	850.7	863.0	847.8	837.0	839.9
7.5°	844.2	852.9	822.5	799.4	798.7
10°	835.5	836.2	786.4	756.1	748.9
12.5°	824.7	813.1	749.6	704.1	693.3
15°	810.2	785.7	707.0	649.2	631.9
17.5°	795.1	757.5	661.5	589.3	565.4
20°	777.7	723.6	611.7	529.3	501.9
22.5°	758.3	691.1	561.8	471.6	442.7
25°	735.1	656.4	509.8	416.0	386.3
27.5°	712.8	621.0	460.0	366.8	336.5
30°	687.5	582.8	411.6	319.9	288.1
32.5°	662.2	543.8	366.8	275.1	251.3
35°	635.5	504.1	325.7	242.6	228.9
37.5°	608.0	465.1	286.7	221.0	208.7
40°	579.9	426.1	247.0	200.0	190.6
42.5°	551.0	387.8	219.5	182.7	174.0
45°	521.4	351.0	199.3	164.6	157.4
47.5°	489.6	314.1	179.8	149.5	143.0
50°	460.0	278.7	160.3	135.8	130.7
52.5°	428.2	244.1	144.4	123.5	119.2
55°	396.5	210.9	129.3	111.9	108.3
57.5°	365.4	179.1	114.8	101.1	98.2
60°	333.6	153.8	102.5	91.0	88.1
62.5°	301.1	133.6	91.0	81.6	78.7
65°	268.6	114.8	79.4	72.2	70.0
67.5°	234.7	96.8	69.3	63.5	62.1
70°	201.5	80.9	59.9	54.9	53.4
72.5°	169.0	65.7	50.6	46.9	45.5
75°	135.0	52.7	41.2	39.0	38.3
77.5°	105.4	41.2	33.2	31.8	31.1
80°	77.3	30.3	26.0	24.6	23.8
82.5°	51.3	20.9	18.8	18.1	17.3
85°	26.7	13.0	11.6	11.6	10.8
87.5°	8.7	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	19.32	20.79	19.69	21.10	21.42	14.13	15.59	14.49	15.91	16.22
	3H	21.65	22.97	22.03	23.29	23.66	15.77	17.09	16.15	17.42	17.78
	4H	22.55	23.78	22.95	24.13	24.51	16.41	17.64	16.81	17.99	18.37
	6H	23.21	24.35	23.62	24.71	25.11	16.90	18.04	17.32	18.41	18.80
	8H	23.42	24.50	23.84	24.89	25.29	17.07	18.16	17.50	18.55	18.95
	12H	23.53	24.57	23.96	24.95	25.38	17.19	18.23	17.62	18.61	19.04
4H	2H	19.34	20.57	19.74	20.92	21.30	14.84	16.07	15.24	16.42	16.80
	3H	21.75	22.77	22.16	23.17	23.58	16.69	17.71	17.10	18.11	18.52
	4H	22.68	23.60	23.11	24.02	24.46	17.44	18.36	17.87	18.77	19.21
	6H	23.46	24.26	23.91	24.70	25.16	18.05	18.85	18.51	19.30	19.76
	8H	23.73	24.48	24.19	24.92	25.39	18.27	19.02	18.73	19.46	19.93
	12H	23.90	24.57	24.39	25.05	25.52	18.43	19.10	18.91	19.58	20.05
8H	4H	22.67	23.42	23.14	23.87	24.33	17.81	18.56	18.28	19.01	19.48
	6H	23.48	24.10	23.98	24.59	25.07	18.55	19.17	19.05	19.66	20.14
	8H	23.78	24.33	24.30	24.84	25.33	18.85	19.40	19.37	19.91	20.40
	12H	24.01	24.50	24.52	24.99	25.56	19.09	19.58	19.60	20.08	20.64
12H	4H	22.65	23.32	23.13	23.80	24.27	17.87	18.54	18.35	19.02	19.49
	6H	23.45	24.01	23.97	24.52	25.01	18.64	19.19	19.15	19.71	20.19
	8H	23.79	24.28	24.30	24.77	25.34	19.00	19.49	19.51	19.98	20.54