

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: P1439644

Luminaire Tested: S122DR-H485D835-X4F0-XX-UDD-FLB-W

Issue Date: 4/2/2026

Test Information

Test Method: LM-79-2024
Report Number: P1439644
TEST IS SCALED FROM IESNA LM-79-24 TEST DATA (G2-2602-702-1)
Test Lab: INNOVATION CENTER
Issue Date: 4/2/2026
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S122DR-H485D835-X4F0-XX-UDD-FLB-W
Description: DEFINE 2, DIRECT RECESSED WITH BATWING FLUSH OPTIC
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

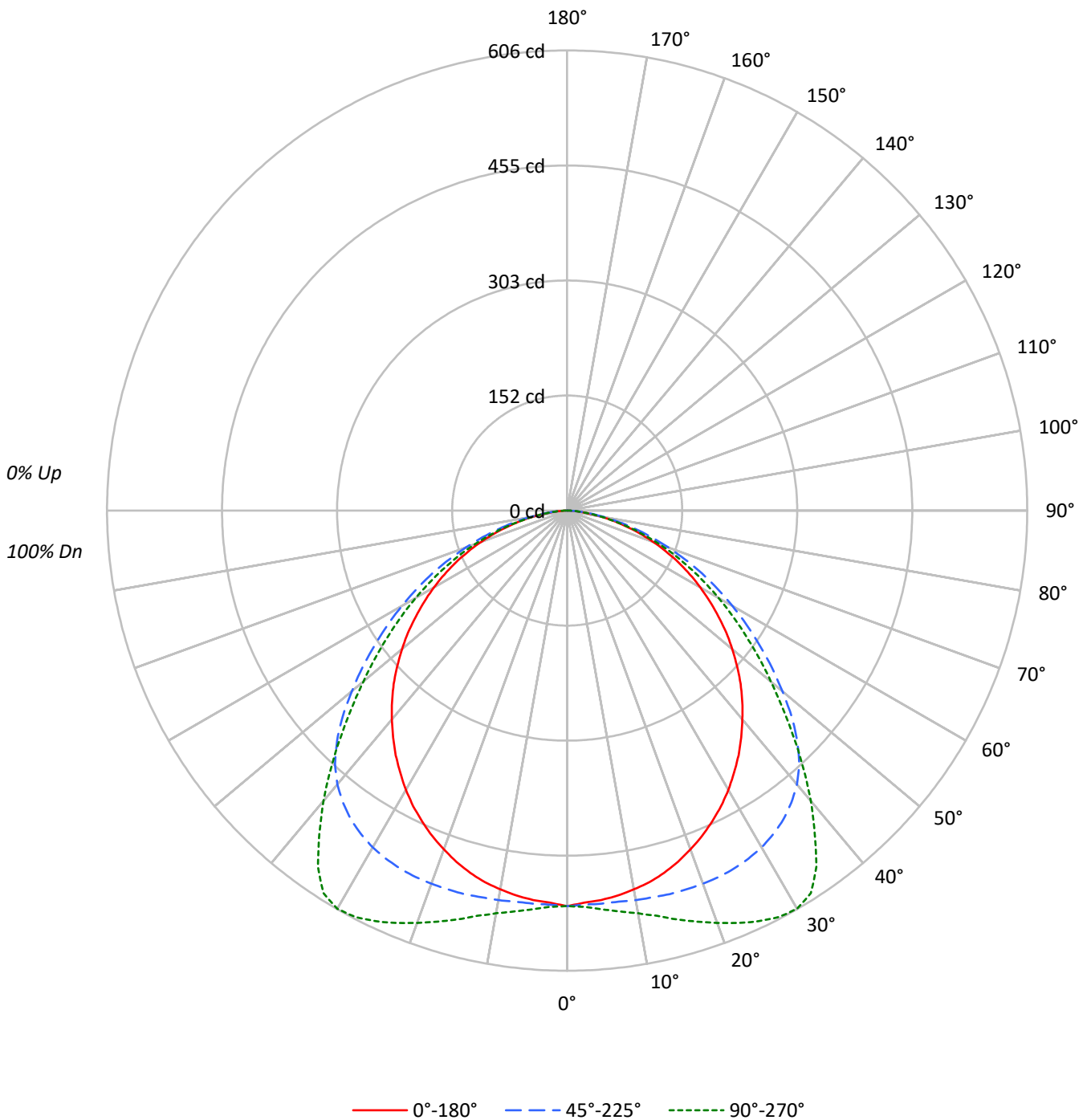
Lumens per Lamp: N/A
Luminaire Lumens: 1602.0 lumens
Efficiency: N/A
Efficacy: 92.6 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.56 / 1.51
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

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	109	105	101	97	107	102	99	95	98	95	92	94	92	89	91	89	87	85
2	100	91	85	79	97	90	84	78	86	81	76	83	79	75	80	76	73	71
3	91	80	72	66	88	79	71	66	76	70	64	73	68	63	71	66	62	60
4	83	71	63	56	81	70	62	56	68	60	55	65	59	54	63	58	53	51
5	76	64	55	48	74	63	54	48	61	53	47	59	52	47	57	51	46	44
6	71	57	48	42	69	56	48	42	55	47	42	53	46	41	51	45	41	39
7	65	52	43	37	64	51	43	37	50	42	37	48	41	36	47	41	36	34
8	61	47	39	33	59	47	39	33	45	38	33	44	37	33	43	37	32	30
9	57	43	35	30	55	43	35	30	42	34	29	41	34	29	40	34	29	27
10	53	40	32	27	52	39	32	27	38	31	27	38	31	26	37	31	26	25

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	9869	9869	9869
5°	9791	9880	10023
10°	9746	10021	10360
15°	9685	10256	10933
20°	9573	10543	11649
25°	9445	10874	12474
30°	9291	11203	13246
35°	9101	11483	13237
40°	8879	11641	12346
45°	8657	11486	11307
50°	8365	10900	10322
55°	8033	10223	9487
60°	7673	9522	8726
65°	7258	8773	7957
70°	6681	7844	7129
75°	5900	6793	6149
80°	4877	5390	4877
85°	3239	3543	3391

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 11577 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	49.8	3.1
10°-20°	148.8	9.3
20°-30°	241.4	15.1
30°-40°	305.5	19.1
40°-50°	305.9	19.1
50°-60°	256.2	16.0
60°-70°	180.6	11.3
70°-80°	93.2	5.8
80°-90°	20.7	1.3
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°	440.0	27.5
0°-40°	745.5	46.5
0°-60°	1307.6	81.6
0°-90°	1602.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1602.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	521	521	521	521	521	
5°	515	524	520	522	527	49
15°	494	508	523	544	557	139
25°	452	476	520	571	597	208
35°	394	425	496	561	572	246
45°	323	357	429	432	422	249
55°	243	273	310	297	287	218
65°	162	180	196	184	178	160
75°	81	89	93	86	84	86
85°	15	16	16	16	16	19
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	520.9	520.9	520.9	520.9	520.9
2.5°	516.8	524.9	519.5	520.2	522.2
5°	514.8	523.6	519.5	522.2	527.0
7.5°	511.4	520.9	519.5	524.9	532.4
10°	506.6	517.5	520.9	530.3	538.5
12.5°	501.2	512.7	521.5	536.4	546.6
15°	493.8	508.0	522.9	543.9	557.4
17.5°	485.0	501.9	522.9	552.0	567.6
20°	474.8	494.5	522.9	558.8	577.8
22.5°	464.0	485.6	522.2	564.9	587.9
25°	451.8	476.2	520.2	571.0	596.7
27.5°	438.9	465.3	516.8	575.7	603.5
30°	424.7	453.1	512.1	577.8	605.5
32.5°	409.1	440.3	505.3	573.7	597.4
35°	393.5	425.4	496.5	560.8	572.3
37.5°	376.6	409.8	485.0	535.8	535.8
40°	359.0	392.9	470.7	501.2	499.2
42.5°	341.4	375.2	452.5	467.4	460.6
45°	323.1	357.0	428.7	432.1	422.0
47.5°	303.4	336.6	401.0	396.2	384.7
50°	283.8	316.3	369.8	361.7	350.2
52.5°	264.2	295.3	340.0	328.5	318.3
55°	243.2	273.0	309.5	296.7	287.2
57.5°	222.8	250.6	280.4	266.2	258.1
60°	202.5	227.6	251.3	237.7	230.3
62.5°	182.2	203.9	223.5	210.0	203.2
65°	161.9	180.2	195.7	183.6	177.5
67.5°	140.9	157.1	168.0	157.1	153.1
70°	120.6	133.4	141.6	132.1	128.7
72.5°	100.2	111.1	116.5	109.1	105.7
75°	80.6	88.7	92.8	86.0	84.0
77.5°	61.6	67.7	69.8	65.0	62.3
80°	44.7	48.1	49.4	46.1	44.7
82.5°	27.8	30.5	31.8	29.1	28.4
85°	14.9	16.3	16.3	16.3	15.6
87.5°	5.4	6.8	6.8	6.8	6.1
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	19.44	21.05	19.80	21.36	21.68	19.95	21.56	20.32	21.88	22.19
	3H	21.01	22.46	21.39	22.79	23.15	21.42	22.87	21.80	23.20	23.56
	4H	21.55	22.91	21.94	23.26	23.64	21.91	23.28	22.31	23.63	24.00
	6H	21.89	23.15	22.30	23.52	23.91	22.21	23.48	22.62	23.84	24.23
	8H	21.97	23.18	22.40	23.57	23.97	22.29	23.49	22.71	23.88	24.28
	12H	22.01	23.16	22.44	23.55	23.97	22.32	23.48	22.75	23.86	24.29
4H	2H	20.19	21.56	20.59	21.91	22.28	20.59	21.96	20.99	22.30	22.68
	3H	21.96	23.10	22.37	23.50	23.90	22.26	23.40	22.67	23.80	24.20
	4H	22.61	23.64	23.04	24.05	24.49	22.85	23.88	23.28	24.29	24.73
	6H	23.05	23.95	23.51	24.39	24.85	23.25	24.14	23.70	24.59	25.04
	8H	23.16	24.00	23.62	24.44	24.91	23.35	24.19	23.81	24.63	25.09
	12H	23.22	23.98	23.70	24.45	24.92	23.41	24.16	23.89	24.63	25.10
8H	4H	22.89	23.73	23.35	24.17	24.64	23.11	23.95	23.57	24.39	24.86
	6H	23.43	24.13	23.93	24.61	25.09	23.59	24.29	24.09	24.78	25.25
	8H	23.59	24.21	24.10	24.72	25.21	23.74	24.36	24.25	24.87	25.35
	12H	23.70	24.25	24.20	24.74	25.30	23.84	24.39	24.35	24.88	25.44
12H	4H	22.91	23.66	23.39	24.14	24.61	23.12	23.88	23.61	24.35	24.82
	6H	23.46	24.08	23.97	24.59	25.08	23.62	24.24	24.13	24.75	25.24
	8H	23.67	24.22	24.17	24.71	25.27	23.81	24.36	24.32	24.85	25.41