

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: METALUX

Report Number: P1588652

Luminaire Tested: 24CZSP-A-49HE-L830-S

Issue Date: 9/3/2026

Test Information

Test Method: LM-79-2019
Report Number: P1588652
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2608-884-6)
Test Lab: INNOVATION CENTER
Issue Date: 9/3/2026
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: METALUX
Catalog Number: 24CZSP-A-49HE-L830-S
Description: 2x4 CZSP LED Luminaire, 3000K CCT and 4500 lumens, 80CRI, Smooth Lens, Air Vented Housing
Light Source: -
Ballast/Driver: -

Summary

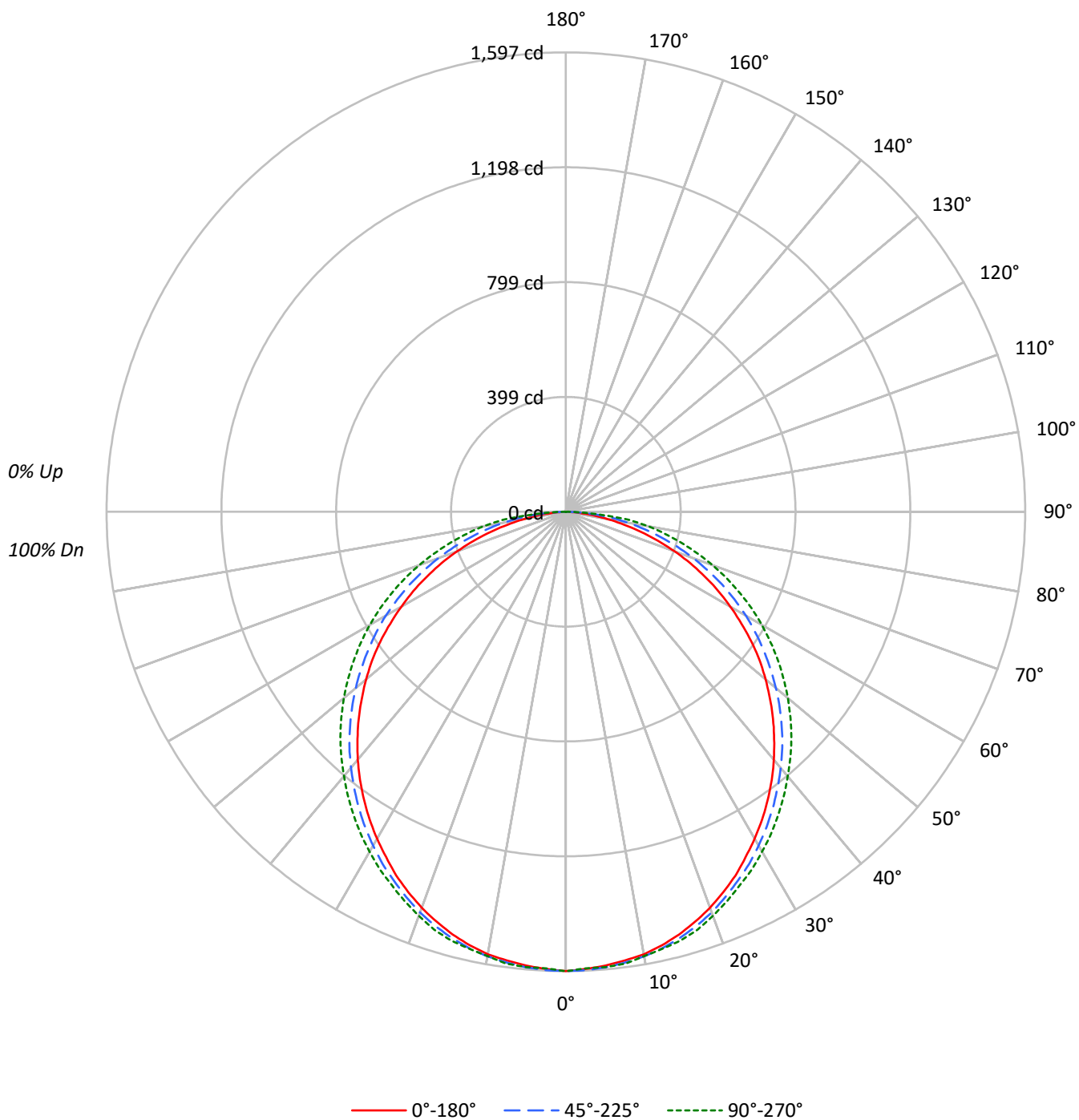
Lumens per Lamp: N/A
Luminaire Lumens: 4662.0 lumens
Efficiency: N/A
Efficacy: 140.0 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.27 / 1.37
Luminous Opening: Rectangular (W 1.83' x L: 3.83' x H: 0')
CIE Type: Direct

Input Watts (W): 33.3
Input Voltage (V): NR
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			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	108	103	99	95	106	101	97	93	97	93	90		93	90	88		89	87	85	83
2	98	90	83	77	96	88	81	76	84	79	74		81	76	72		78	74	71	69
3	89	79	70	64	87	77	69	63	74	67	62		71	65	61		69	64	60	57
4	82	69	60	54	79	68	60	53	66	58	52		63	57	52		61	56	51	49
5	75	62	53	46	73	61	52	46	59	51	45		57	50	45		55	49	44	42
6	69	56	47	40	67	55	46	40	53	45	40		51	44	39		50	44	39	37
7	64	50	42	35	62	50	41	35	48	40	35		47	40	35		45	39	34	32
8	60	46	37	32	58	45	37	31	44	37	31		43	36	31		42	35	31	29
9	56	42	34	28	54	42	34	28	40	33	28		39	33	28		38	32	28	26
10	52	39	31	26	51	38	31	26	37	30	25		37	30	25		36	30	25	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2446	2446	2446
5°	2435	2444	2443
10°	2429	2441	2439
15°	2412	2431	2446
20°	2388	2416	2436
25°	2358	2391	2420
30°	2321	2370	2413
35°	2288	2347	2406
40°	2250	2323	2399
45°	2207	2300	2402
50°	2160	2272	2401
55°	2103	2240	2404
60°	2024	2215	2410
65°	1932	2173	2417
70°	1800	2112	2428
75°	1604	2028	2452
80°	1327	1931	2571
85°	863	1743	2248

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°

Vertical Angle: 82.5°

Luminance: 2653 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	151.0	3.2
10°-20°	432.4	9.3
20°-30°	652.2	14.0
30°-40°	785.5	16.8
40°-50°	820.4	17.6
50°-60°	753.4	16.2
60°-70°	593.4	12.7
70°-80°	364.0	7.8
80°-90°	109.6	2.3
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°	1235.6	26.5
0°-40°	2021.2	43.4
0°-60°	3595.0	77.1
0°-90°	4662.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4662.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1597	1597	1597	1597	1597	
5°	1584	1586	1590	1595	1589	150
15°	1521	1524	1533	1543	1543	429
25°	1395	1398	1415	1432	1432	642
35°	1224	1230	1255	1281	1287	765
45°	1019	1030	1062	1099	1109	786
55°	788	802	839	886	900	703
65°	533	551	600	650	667	527
75°	271	293	343	397	414	287
85°	49	68	99	126	128	64
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1596.9	1596.9	1596.9	1596.9	1596.9
2.5°	1590.7	1593.8	1594.8	1595.8	1588.7
5°	1583.6	1585.6	1589.7	1594.8	1588.7
7.5°	1573.3	1575.4	1580.5	1587.7	1584.6
10°	1562.1	1563.1	1569.2	1574.4	1568.2
12.5°	1543.7	1546.7	1553.9	1558.0	1555.9
15°	1521.2	1524.2	1533.4	1542.6	1542.6
17.5°	1494.6	1498.7	1509.9	1522.2	1523.2
20°	1464.9	1468.0	1482.3	1494.6	1494.6
22.5°	1431.1	1435.2	1449.6	1462.9	1464.9
25°	1395.3	1398.4	1414.8	1432.2	1432.2
27.5°	1353.4	1359.5	1380.0	1397.4	1401.5
30°	1312.5	1317.6	1340.1	1361.6	1364.6
32.5°	1269.5	1275.6	1299.2	1322.7	1327.8
35°	1223.5	1229.6	1255.2	1280.8	1286.9
37.5°	1175.4	1182.6	1209.2	1238.8	1245.0
40°	1125.3	1133.5	1162.1	1193.8	1199.9
42.5°	1072.1	1083.3	1114.0	1146.8	1156.0
45°	1018.9	1030.1	1061.8	1098.7	1108.9
47.5°	962.6	975.9	1008.7	1047.5	1058.8
50°	906.4	919.7	953.4	995.4	1007.6
52.5°	849.1	862.4	897.1	941.1	954.4
55°	787.7	802.0	838.8	885.9	900.2
57.5°	724.3	742.7	781.6	829.6	844.0
60°	660.8	679.3	723.2	770.3	786.7
62.5°	598.4	615.8	660.8	711.0	728.4
65°	533.0	551.4	599.5	649.6	667.0
67.5°	468.5	486.9	535.0	587.2	605.6
70°	402.0	422.5	471.6	523.8	542.2
72.5°	335.5	357.0	407.1	460.3	477.7
75°	271.1	292.6	342.7	396.9	414.3
77.5°	207.7	231.2	280.3	335.5	351.9
80°	150.4	172.9	218.9	273.1	291.5
82.5°	96.2	115.6	161.6	212.8	226.1
85°	49.1	67.5	99.2	125.8	127.9
87.5°	15.3	21.5	32.7	49.1	50.1
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	14.59	16.25	14.95	16.56	16.88	15.42	17.08	15.78	17.39	17.71
	3H	16.34	17.85	16.72	18.17	18.53	17.53	19.04	17.91	19.37	19.73
	4H	16.96	18.38	17.36	18.73	19.10	18.42	19.84	18.82	20.19	20.57
	6H	17.37	18.69	17.78	19.05	19.45	19.20	20.52	19.61	20.89	21.28
	8H	17.48	18.74	17.90	19.13	19.53	19.52	20.78	19.95	21.17	21.57
	12H	17.53	18.74	17.96	19.12	19.55	19.73	20.94	20.16	21.33	21.75
4H	2H	15.36	16.78	15.76	17.13	17.50	16.00	17.43	16.40	17.77	18.15
	3H	17.33	18.53	17.74	18.93	19.33	18.36	19.56	18.77	19.95	20.35
	4H	18.07	19.16	18.50	19.57	20.00	19.41	20.50	19.84	20.91	21.34
	6H	18.60	19.55	19.05	19.99	20.45	20.36	21.32	20.82	21.75	22.21
	8H	18.75	19.64	19.21	20.08	20.54	20.76	21.65	21.22	22.09	22.56
	12H	18.83	19.63	19.31	20.11	20.58	21.04	21.84	21.52	22.31	22.78
8H	4H	18.53	19.42	18.99	19.86	20.33	19.70	20.59	20.16	21.03	21.50
	6H	19.19	19.94	19.68	20.42	20.90	20.81	21.56	21.30	22.04	22.52
	8H	19.40	20.07	19.91	20.58	21.06	21.32	21.99	21.83	22.50	22.98
	12H	19.54	20.13	20.05	20.62	21.18	21.71	22.30	22.21	22.79	23.35
12H	4H	18.62	19.42	19.10	19.90	20.37	19.72	20.53	20.20	21.00	21.47
	6H	19.32	19.99	19.83	20.50	20.98	20.86	21.53	21.37	22.03	22.52
	8H	19.60	20.19	20.11	20.68	21.24	21.44	22.03	21.94	22.52	23.08