

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: P1588321

Luminaire Tested: 24CZSP-49HE-L850

Issue Date: 9/3/2026

Test Information

Test Method: LM-79-2019
Report Number: P1588321
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2603-711-1)
Test Lab: INNOVATION CENTER
Issue Date: 9/3/2026
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: METALUX
Catalog Number: 24CZSP-49HE-L850
Description: 2x4 CZSP LED Luminaire, 5000K CCT and 4500 lumens, 80CRI, Ribbed Lens
Light Source: -
Ballast/Driver: -

Summary

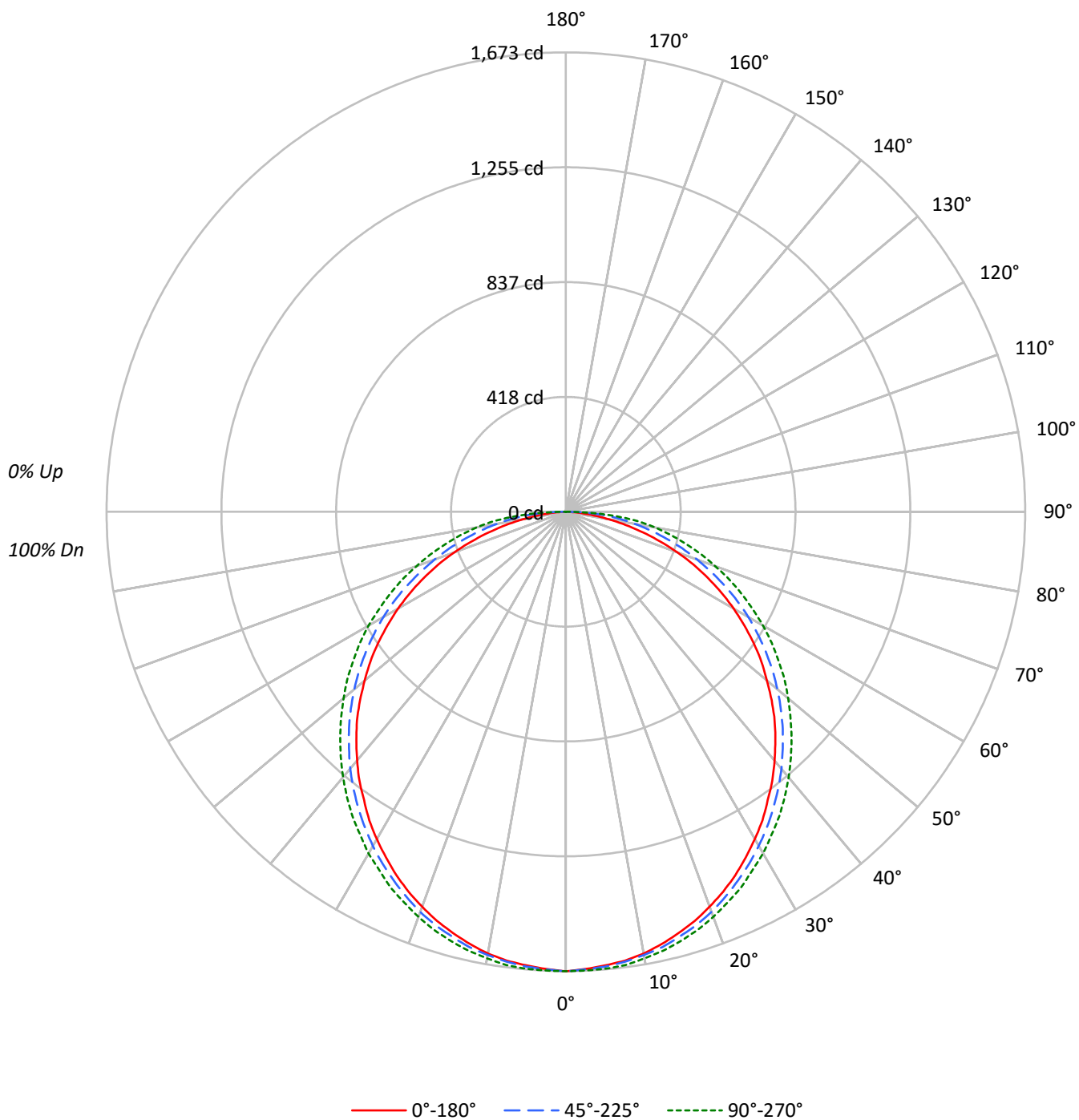
Lumens per Lamp: N/A
Luminaire Lumens: 4964.0 lumens
Efficiency: N/A
Efficacy: 149.1 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.27 / 1.38
Luminous Opening: Rectangular (W 1.83' x L: 3.83' x H: 0')
CIE Type: Direct

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

TEST NUMBER: P1588321

CATALOG NUMBER: 24CZSP-49HE-L850

Luminous Intensity Polar Plot



TEST NUMBER: P1588321

CATALOG NUMBER: 24CZSP-49HE-L850

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	98	94	105	101	97	93	96	93	90		92	90	87		89	87	85	82
2	98	89	82	76	95	87	81	75	84	78	73		81	76	72		77	74	70	68
3	89	78	70	63	87	77	69	62	74	67	61		71	65	60		68	63	59	57
4	81	69	60	53	79	68	59	53	65	58	52		63	56	51		61	55	51	48
5	75	62	52	46	73	60	52	45	58	51	45		56	50	44		54	49	44	42
6	69	55	46	40	67	54	46	39	53	45	39		51	44	39		49	43	38	36
7	64	50	41	35	62	49	41	35	48	40	35		46	39	34		45	39	34	32
8	60	46	37	31	58	45	37	31	44	36	31		42	36	31		41	35	30	29
9	56	42	34	28	54	41	33	28	40	33	28		39	32	28		38	32	27	26
10	52	39	31	25	51	38	30	25	37	30	25		36	30	25		35	29	25	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2563	2563	2563
5°	2550	2556	2569
10°	2541	2549	2568
15°	2518	2540	2566
20°	2495	2528	2559
25°	2468	2505	2552
30°	2435	2486	2542
35°	2397	2463	2533
40°	2365	2442	2524
45°	2330	2419	2518
50°	2278	2396	2517
55°	2231	2374	2524
60°	2163	2353	2542
65°	2071	2315	2559
70°	1938	2276	2590
75°	1724	2244	2675
80°	1417	2254	2908
85°	967	2511	3211

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°

Vertical Angle: 85°

Luminance: 3211 cd/sqm

TEST NUMBER: P1588321

CATALOG NUMBER: 24CZSP-49HE-L850

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	158.4	3.2
10°-20°	453.4	9.1
20°-30°	685.7	13.8
30°-40°	827.4	16.7
40°-50°	865.1	17.4
50°-60°	798.2	16.1
60°-70°	634.7	12.8
70°-80°	400.6	8.1
80°-90°	140.5	2.8
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°	1297.5	26.1
0°-40°	2124.9	42.8
0°-60°	3788.2	76.3
0°-90°	4964.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4964.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1673	1673	1673	1673	1673	
5°	1658	1671	1662	1666	1671	158
15°	1588	1606	1602	1614	1618	448
25°	1460	1482	1482	1502	1510	673
35°	1282	1309	1318	1344	1355	803
45°	1076	1099	1117	1150	1162	828
55°	835	860	889	932	945	746
65°	572	598	639	692	706	565
75°	291	324	379	436	452	309
85°	55	91	143	177	183	70
90°	0	0	0	0	0	

TEST NUMBER: P1588321

CATALOG NUMBER: 24CZSP-49HE-L850

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1673.4	1673.4	1673.4	1673.4	1673.4
2.5°	1666.5	1677.5	1667.9	1673.4	1672.0
5°	1658.3	1670.6	1662.4	1666.5	1670.6
7.5°	1648.7	1662.4	1652.8	1659.6	1665.1
10°	1633.5	1647.3	1639.0	1647.3	1651.4
12.5°	1612.9	1629.4	1623.9	1633.5	1637.7
15°	1588.2	1606.1	1601.9	1614.3	1618.4
17.5°	1562.1	1581.3	1578.6	1592.3	1596.4
20°	1530.5	1552.5	1551.1	1564.8	1570.3
22.5°	1497.5	1519.5	1518.1	1533.2	1540.1
25°	1460.4	1482.4	1482.4	1501.6	1509.9
27.5°	1419.2	1443.9	1445.3	1464.6	1471.4
30°	1376.6	1401.4	1405.5	1426.1	1437.1
32.5°	1332.7	1356.0	1362.9	1386.2	1394.5
35°	1281.8	1309.3	1317.5	1343.7	1354.6
37.5°	1235.1	1259.8	1270.8	1298.3	1309.3
40°	1182.9	1209.0	1221.4	1251.6	1262.6
42.5°	1129.3	1155.4	1169.2	1202.1	1213.1
45°	1075.7	1099.1	1117.0	1149.9	1162.3
47.5°	1016.7	1042.8	1062.0	1097.7	1110.1
50°	956.2	983.7	1005.7	1044.1	1056.5
52.5°	898.5	923.2	948.0	990.6	1004.3
55°	835.3	860.0	888.9	931.5	945.2
57.5°	770.7	795.5	828.4	873.8	888.9
60°	706.2	730.9	768.0	814.7	829.8
62.5°	638.9	663.6	704.8	752.9	766.6
65°	571.5	597.6	638.9	692.4	706.2
67.5°	502.8	528.9	572.9	629.2	644.3
70°	432.8	461.6	508.3	564.7	578.4
72.5°	360.0	392.9	445.1	500.1	516.6
75°	291.3	324.2	379.2	435.5	452.0
77.5°	223.9	261.0	316.0	375.1	392.9
80°	160.7	197.8	255.5	313.2	329.7
82.5°	103.0	141.5	199.2	254.2	267.9
85°	55.0	90.7	142.9	177.2	182.7
87.5°	17.9	46.7	64.6	85.2	86.6
90°	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P1588321

CATALOG NUMBER: 24CZSP-49HE-L850

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	14.83	16.50	15.19	16.81	17.13	15.55	17.22	15.91	17.53	17.85
	3H	16.61	18.13	16.99	18.46	18.82	17.71	19.23	18.09	19.56	19.92
	4H	17.24	18.68	17.64	19.02	19.40	18.65	20.08	19.05	20.43	20.80
	6H	17.67	19.00	18.08	19.36	19.75	19.51	20.84	19.92	21.20	21.59
	8H	17.78	19.05	18.20	19.44	19.84	19.88	21.16	20.31	21.55	21.94
	12H	17.84	19.06	18.27	19.44	19.87	20.20	21.42	20.62	21.80	22.23
4H	2H	15.59	17.02	15.99	17.37	17.75	16.15	17.58	16.55	17.93	18.31
	3H	17.61	18.82	18.02	19.22	19.62	18.56	19.77	18.97	20.17	20.57
	4H	18.38	19.47	18.81	19.89	20.32	19.67	20.77	20.10	21.18	21.61
	6H	18.93	19.89	19.38	20.33	20.79	20.71	21.67	21.16	22.11	22.56
	8H	19.09	19.99	19.55	20.43	20.90	21.17	22.08	21.63	22.52	22.98
	12H	19.19	20.00	19.67	20.48	20.94	21.57	22.38	22.05	22.86	23.33
8H	4H	18.86	19.77	19.32	20.21	20.67	19.98	20.89	20.44	21.33	21.79
	6H	19.57	20.33	20.06	20.81	21.29	21.20	21.96	21.69	22.44	22.92
	8H	19.81	20.49	20.32	21.00	21.48	21.80	22.48	22.31	22.98	23.47
	12H	19.99	20.59	20.49	21.08	21.64	22.34	22.94	22.85	23.43	23.99
12H	4H	18.97	19.78	19.45	20.26	20.72	20.02	20.83	20.49	21.30	21.77
	6H	19.73	20.41	20.24	20.92	21.40	21.27	21.95	21.77	22.45	22.93
	8H	20.06	20.66	20.56	21.15	21.71	21.94	22.54	22.45	23.03	23.59