

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: P1588658

Luminaire Tested: 24CZSP-A-49HE-L845-S

Issue Date: 9/3/2026

Test Information

Test Method: LM-79-2019
Report Number: P1588658
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-L845-S
Description: 2x4 CZSP LED Luminaire, 4500K CCT and 4500 lumens, 80CRI, Smooth Lens, Air Vented Housing
Light Source: -
Ballast/Driver: -

Summary

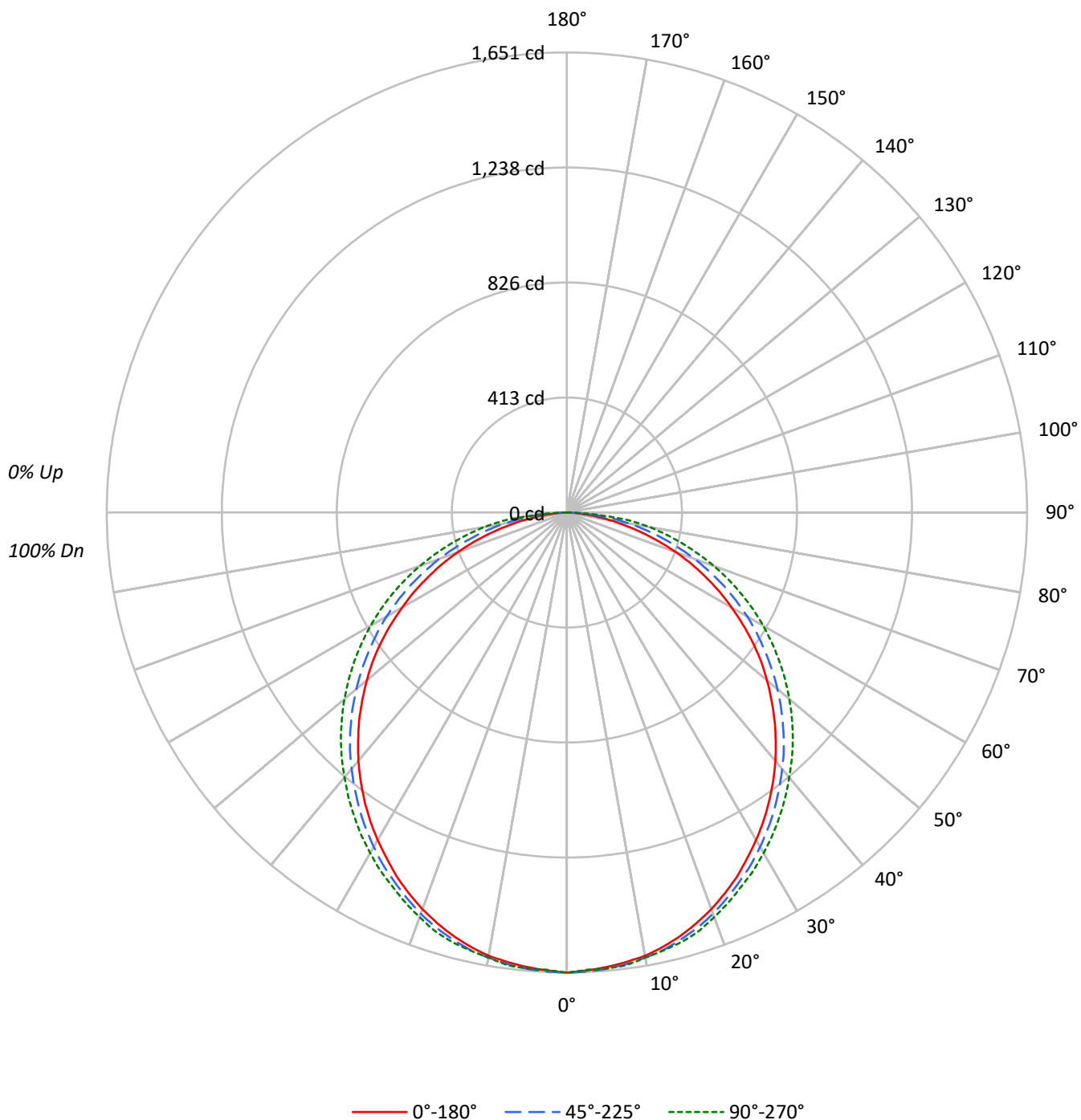
Lumens per Lamp: N/A
Luminaire Lumens: 4821.0 lumens
Efficiency: N/A
Efficacy: 144.8 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.27 / 1.37
Luminous Opening: Rectangular (W 1.83' x L: 3.83' x H: 0')
CIE Type: Direct

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
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10
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°	2529	2529	2529
5°	2518	2527	2526
10°	2512	2524	2522
15°	2494	2514	2530
20°	2469	2498	2519
25°	2438	2472	2503
30°	2400	2451	2496
35°	2366	2427	2488
40°	2326	2403	2481
45°	2282	2379	2484
50°	2233	2349	2483
55°	2175	2316	2486
60°	2093	2291	2492
65°	1997	2247	2500
70°	1862	2184	2511
75°	1659	2097	2535
80°	1372	1997	2659
85°	893	1803	2323

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°

Vertical Angle: 82.5°

Luminance: 2743 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	156.2	3.2
10°-20°	447.2	9.3
20°-30°	674.4	14.0
30°-40°	812.3	16.8
40°-50°	848.4	17.6
50°-60°	779.1	16.2
60°-70°	613.6	12.7
70°-80°	376.5	7.8
80°-90°	113.3	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°	1277.8	26.5
0°-40°	2090.1	43.4
0°-60°	3717.6	77.1
0°-90°	4821.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4821.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1651	1651	1651	1651	1651	
5°	1638	1640	1644	1649	1643	156
15°	1573	1576	1586	1595	1595	444
25°	1443	1446	1463	1481	1481	664
35°	1265	1272	1298	1324	1331	791
45°	1054	1065	1098	1136	1147	812
55°	815	829	867	916	931	727
65°	551	570	620	672	690	545
75°	280	302	354	410	428	297
85°	51	70	103	130	132	66
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1651.3	1651.3	1651.3	1651.3	1651.3
2.5°	1645.0	1648.1	1649.2	1650.3	1642.9
5°	1637.6	1639.7	1643.9	1649.2	1642.9
7.5°	1627.0	1629.1	1634.4	1641.8	1638.6
10°	1615.4	1616.4	1622.8	1628.0	1621.7
12.5°	1596.3	1599.5	1606.9	1611.1	1609.0
15°	1573.0	1576.2	1585.7	1595.3	1595.3
17.5°	1545.5	1549.8	1561.4	1574.1	1575.2
20°	1514.9	1518.0	1532.8	1545.5	1545.5
22.5°	1479.9	1484.2	1499.0	1512.7	1514.9
25°	1442.9	1446.1	1463.0	1481.0	1481.0
27.5°	1399.6	1405.9	1427.1	1445.0	1449.3
30°	1357.2	1362.5	1385.8	1408.0	1411.2
32.5°	1312.8	1319.2	1343.5	1367.8	1373.1
35°	1265.2	1271.5	1298.0	1324.4	1330.8
37.5°	1215.5	1222.9	1250.4	1281.1	1287.4
40°	1163.6	1172.1	1201.7	1234.5	1240.9
42.5°	1108.6	1120.3	1152.0	1185.9	1195.4
45°	1053.6	1065.3	1098.1	1136.1	1146.7
47.5°	995.4	1009.2	1043.1	1083.2	1094.9
50°	937.3	951.0	985.9	1029.3	1042.0
52.5°	878.0	891.8	927.7	973.2	987.0
55°	814.6	829.4	867.4	916.1	930.9
57.5°	749.0	768.0	808.2	857.9	872.7
60°	683.4	702.4	747.9	796.6	813.5
62.5°	618.8	636.8	683.4	735.2	753.2
65°	551.1	570.2	619.9	671.7	689.7
67.5°	484.5	503.5	553.3	607.2	626.3
70°	415.7	436.9	487.7	541.6	560.7
72.5°	347.0	369.2	421.0	476.0	494.0
75°	280.3	302.5	354.4	410.5	428.4
77.5°	214.7	239.1	289.9	347.0	363.9
80°	155.5	178.8	226.4	282.4	301.5
82.5°	99.4	119.5	167.1	220.0	233.8
85°	50.8	69.8	102.6	130.1	132.2
87.5°	15.9	22.2	33.9	50.8	51.8
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	14.70	16.36	15.07	16.68	16.99	15.53	17.19	15.90	17.51	17.82
	3H	16.46	17.96	16.83	18.29	18.65	17.65	19.16	18.03	19.48	19.84
	4H	17.08	18.50	17.47	18.85	19.22	18.54	19.96	18.94	20.31	20.68
	6H	17.49	18.81	17.90	19.17	19.56	19.32	20.64	19.73	21.00	21.39
	8H	17.59	18.86	18.02	19.25	19.64	19.64	20.90	20.06	21.29	21.69
	12H	17.65	18.86	18.08	19.24	19.67	19.85	21.06	20.28	21.44	21.87
4H	2H	15.47	16.90	15.87	17.24	17.62	16.12	17.54	16.52	17.89	18.26
	3H	17.45	18.65	17.86	19.05	19.44	18.47	19.67	18.88	20.07	20.47
	4H	18.19	19.27	18.62	19.69	20.12	19.53	20.61	19.96	21.03	21.46
	6H	18.72	19.67	19.17	20.11	20.56	20.48	21.43	20.93	21.87	22.33
	8H	18.86	19.75	19.32	20.20	20.66	20.88	21.77	21.34	22.21	22.67
	12H	18.95	19.75	19.43	20.22	20.69	21.15	21.96	21.63	22.43	22.90
8H	4H	18.65	19.54	19.11	19.98	20.44	19.82	20.71	20.28	21.15	21.61
	6H	19.31	20.05	19.80	20.54	21.01	20.93	21.67	21.42	22.16	22.63
	8H	19.52	20.19	20.03	20.69	21.18	21.44	22.11	21.95	22.61	23.10
	12H	19.66	20.25	20.16	20.74	21.30	21.83	22.42	22.33	22.91	23.47
12H	4H	18.74	19.54	19.22	20.01	20.48	19.84	20.64	20.32	21.12	21.59
	6H	19.44	20.11	19.95	20.61	21.10	20.97	21.64	21.48	22.15	22.63
	8H	19.72	20.31	20.22	20.80	21.36	21.55	22.15	22.06	22.63	23.19