

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: P1588329

Luminaire Tested: 24CZSP-49HE-L945

Issue Date: 9/3/2026

Test Information

Test Method: LM-79-2019
Report Number: P1588329
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-L945
Description: 2x4 CZSP LED Luminaire, 4500K CCT and 4500 lumens, 90CRI, Ribbed Lens
Light Source: -
Ballast/Driver: -

Summary

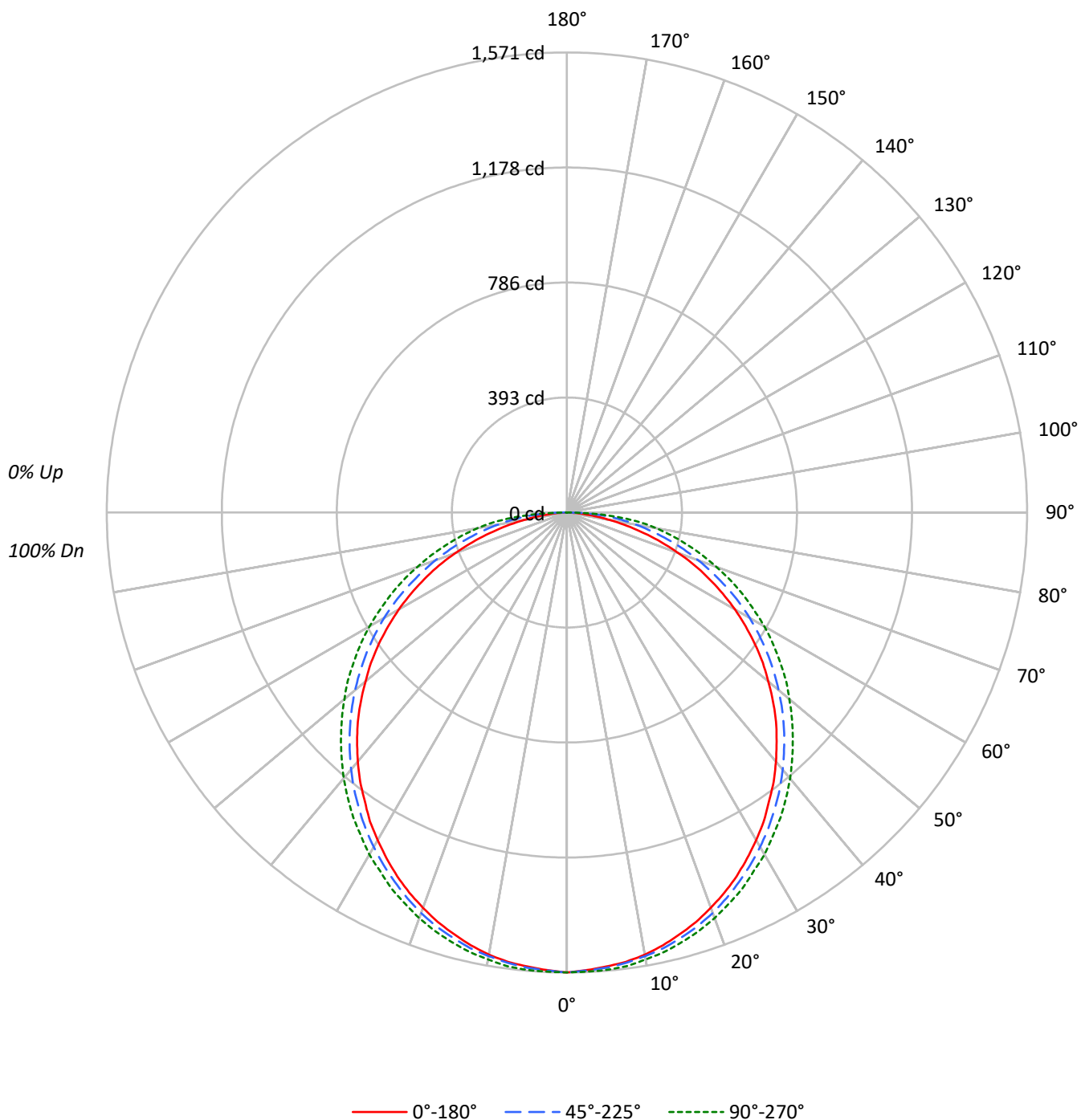
Lumens per Lamp: N/A
Luminaire Lumens: 4659.0 lumens
Efficiency: N/A
Efficacy: 139.9 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.27 / 1.38
Luminous Opening: Rectangular (W 1.83' x L: 3.83' x H: 0')
CIE Type: Direct

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

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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
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111		106	106	106		102
1	108	103	98	94	105	101	97	93	96	93	90		92	90	87		89
2	98	89	82	76	95	87	81	75	84	78	73		81	76	72		77
3	89	78	70	63	87	77	69	62	74	67	61		71	65	60		68
4	81	69	60	53	79	68	59	53	65	58	52		63	56	51		61
5	75	62	52	46	73	60	52	45	58	51	45		56	50	44		54
6	69	55	46	40	67	54	46	39	53	45	39		51	44	39		49
7	64	50	41	35	62	49	41	35	48	40	35		46	39	34		45
8	60	46	37	31	58	45	37	31	44	36	31		42	36	31		41
9	56	42	34	28	54	41	33	28	40	33	28		39	32	28		38
10	52	39	31	25	51	38	30	25	37	30	25		36	30	25		35

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2406	2406	2406
5°	2393	2399	2411
10°	2385	2392	2410
15°	2364	2384	2409
20°	2341	2373	2402
25°	2316	2351	2395
30°	2285	2333	2385
35°	2250	2312	2377
40°	2220	2292	2369
45°	2187	2271	2363
50°	2139	2249	2363
55°	2094	2228	2369
60°	2030	2208	2386
65°	1944	2173	2402
70°	1819	2137	2431
75°	1618	2106	2510
80°	1331	2115	2730
85°	907	2357	3014

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°

Vertical Angle: 85°

Luminance: 3014 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	148.6	3.2
10°-20°	425.6	9.1
20°-30°	643.5	13.8
30°-40°	776.6	16.7
40°-50°	812.0	17.4
50°-60°	749.2	16.1
60°-70°	595.7	12.8
70°-80°	376.0	8.1
80°-90°	131.8	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°	1217.8	26.1
0°-40°	1994.3	42.8
0°-60°	3555.5	76.3
0°-90°	4659.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4659.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1571	1571	1571	1571	1571	
5°	1556	1568	1560	1564	1568	148
15°	1491	1507	1504	1515	1519	421
25°	1371	1391	1391	1409	1417	631
35°	1203	1229	1237	1261	1271	754
45°	1010	1032	1048	1079	1091	778
55°	784	807	834	874	887	700
65°	536	561	600	650	663	530
75°	273	304	356	409	424	290
85°	52	85	134	166	172	65
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1570.6	1570.6	1570.6	1570.6	1570.6
2.5°	1564.1	1574.4	1565.4	1570.6	1569.3
5°	1556.4	1568.0	1560.2	1564.1	1568.0
7.5°	1547.4	1560.2	1551.2	1557.7	1562.8
10°	1533.2	1546.1	1538.3	1546.1	1549.9
12.5°	1513.8	1529.3	1524.1	1533.2	1537.0
15°	1490.6	1507.4	1503.5	1515.1	1519.0
17.5°	1466.1	1484.2	1481.6	1494.5	1498.4
20°	1436.5	1457.1	1455.8	1468.7	1473.9
22.5°	1405.5	1426.1	1424.9	1439.0	1445.5
25°	1370.7	1391.3	1391.3	1409.4	1417.1
27.5°	1332.0	1355.2	1356.5	1374.6	1381.0
30°	1292.0	1315.3	1319.1	1338.5	1348.8
32.5°	1250.8	1272.7	1279.1	1301.1	1308.8
35°	1203.1	1228.9	1236.6	1261.1	1271.4
37.5°	1159.2	1182.4	1192.8	1218.5	1228.9
40°	1110.2	1134.7	1146.3	1174.7	1185.0
42.5°	1059.9	1084.4	1097.3	1128.3	1138.6
45°	1009.6	1031.6	1048.3	1079.3	1090.9
47.5°	954.2	978.7	996.8	1030.3	1041.9
50°	897.5	923.3	943.9	980.0	991.6
52.5°	843.3	866.5	889.7	929.7	942.6
55°	784.0	807.2	834.3	874.3	887.1
57.5°	723.4	746.6	777.5	820.1	834.3
60°	662.8	686.0	720.8	764.7	778.8
62.5°	599.6	622.8	661.5	706.6	719.5
65°	536.4	560.9	599.6	649.9	662.8
67.5°	471.9	496.4	537.7	590.6	604.8
70°	406.2	433.3	477.1	530.0	542.9
72.5°	337.8	368.8	417.8	469.4	484.8
75°	273.4	304.3	355.9	408.8	424.2
77.5°	210.2	245.0	296.6	352.0	368.8
80°	150.9	185.7	239.8	294.0	309.5
82.5°	96.7	132.8	187.0	238.6	251.4
85°	51.6	85.1	134.1	166.3	171.5
87.5°	16.8	43.8	60.6	79.9	81.2
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	14.61	16.28	14.97	16.59	16.91	15.33	17.00	15.69	17.31	17.63
	3H	16.39	17.91	16.77	18.24	18.60	17.49	19.01	17.87	19.34	19.70
	4H	17.02	18.46	17.42	18.80	19.18	18.43	19.86	18.83	20.21	20.58
	6H	17.45	18.78	17.86	19.14	19.53	19.29	20.62	19.70	20.98	21.37
	8H	17.56	18.83	17.98	19.22	19.62	19.66	20.94	20.09	21.33	21.72
	12H	17.62	18.84	18.05	19.22	19.65	19.98	21.20	20.40	21.58	22.01
4H	2H	15.37	16.80	15.77	17.15	17.52	15.93	17.36	16.33	17.71	18.09
	3H	17.39	18.60	17.80	19.00	19.40	18.34	19.55	18.75	19.95	20.35
	4H	18.16	19.25	18.59	19.67	20.10	19.45	20.55	19.88	20.96	21.39
	6H	18.71	19.67	19.16	20.11	20.57	20.49	21.45	20.94	21.89	22.34
	8H	18.87	19.77	19.33	20.21	20.68	20.95	21.86	21.41	22.30	22.76
	12H	18.97	19.78	19.45	20.26	20.72	21.35	22.16	21.83	22.64	23.11
8H	4H	18.64	19.55	19.10	19.99	20.45	19.76	20.67	20.22	21.11	21.57
	6H	19.35	20.11	19.84	20.59	21.07	20.98	21.74	21.47	22.22	22.70
	8H	19.59	20.27	20.10	20.78	21.26	21.58	22.26	22.09	22.76	23.25
	12H	19.77	20.37	20.27	20.86	21.42	22.12	22.72	22.63	23.21	23.77
12H	4H	18.75	19.56	19.23	20.04	20.50	19.80	20.61	20.27	21.08	21.55
	6H	19.51	20.19	20.02	20.70	21.18	21.05	21.73	21.55	22.23	22.71
	8H	19.84	20.44	20.34	20.93	21.49	21.72	22.32	22.23	22.81	23.37