

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: P1588331

Luminaire Tested: 24CZSP-49HE-L950

Issue Date: 9/3/2026

Test Information

Test Method: LM-79-2019
Report Number: P1588331
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-L950
Description: 2x4 CZSP LED Luminaire, 5000K CCT and 4500 lumens, 90CRI, Ribbed Lens
Light Source: -
Ballast/Driver: -

Summary

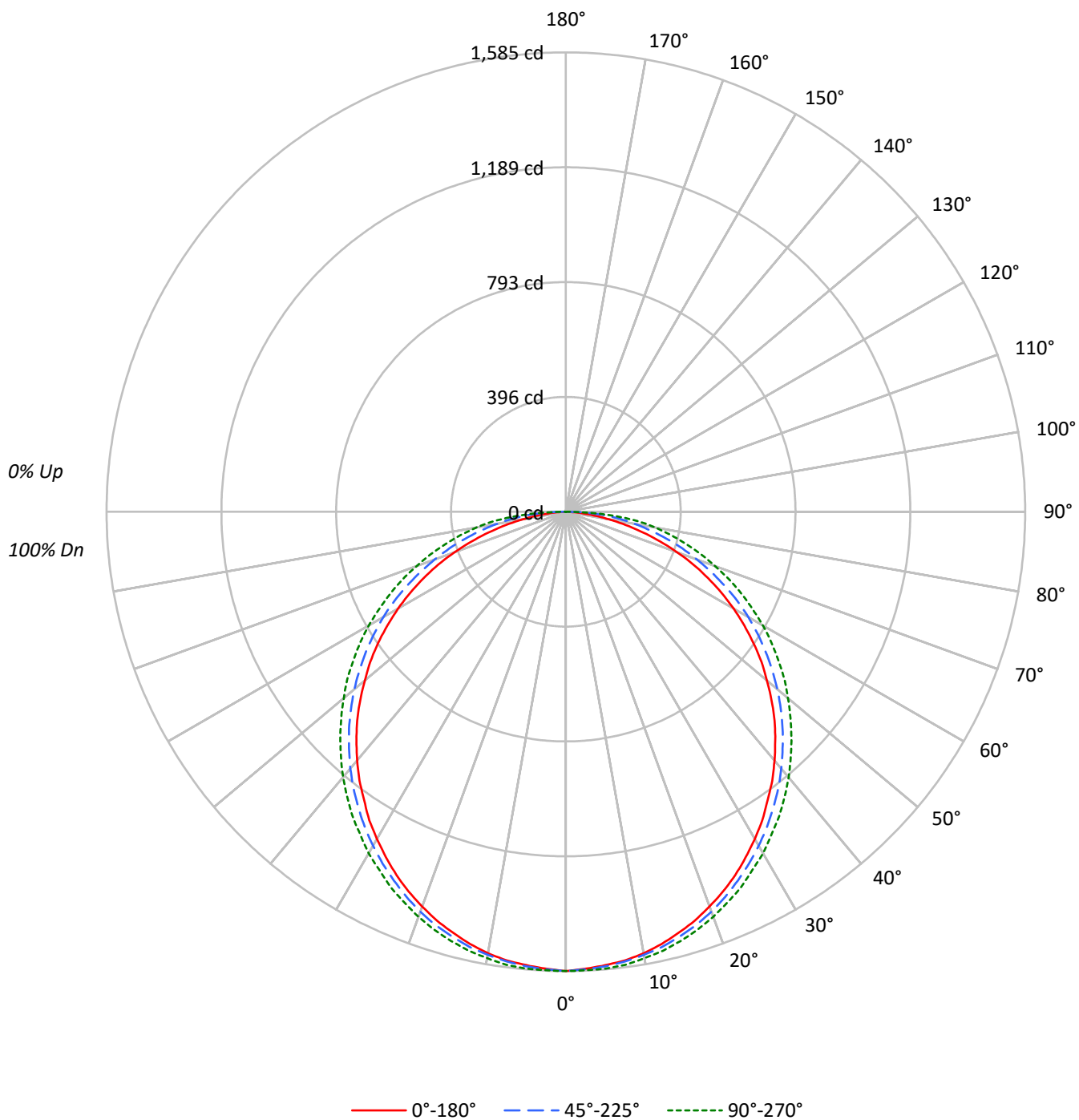
Lumens per Lamp: N/A
Luminaire Lumens: 4701.0 lumens
Efficiency: N/A
Efficacy: 141.2 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.27 / 1.38
Luminous Opening: Rectangular (W 1.83' x L: 3.83' x H: 0')
CIE Type: Direct

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	30	10	50	30	10
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	102	102	100
1	108	103	98	94	105	101	97	93	96	93	90	92	90	87	89	87	85	85	85	82
2	98	89	82	76	95	87	81	75	84	78	73	81	76	72	77	74	70	70	70	68
3	89	78	70	63	87	77	69	62	74	67	61	71	65	60	68	63	59	59	59	57
4	81	69	60	53	79	68	59	53	65	58	52	63	56	51	61	55	51	51	51	48
5	75	62	52	46	73	60	52	45	58	51	45	56	50	44	54	49	44	44	44	42
6	69	55	46	40	67	54	46	39	53	45	39	51	44	39	49	43	38	38	38	36
7	64	50	41	35	62	49	41	35	48	40	35	46	39	34	45	39	34	34	34	32
8	60	46	37	31	58	45	37	31	44	36	31	42	36	31	41	35	30	30	30	29
9	56	42	34	28	54	41	33	28	40	33	28	39	32	28	38	32	27	27	27	26
10	52	39	31	25	51	38	30	25	37	30	25	36	30	25	35	29	25	25	25	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2427	2427	2427
5°	2414	2420	2432
10°	2406	2414	2432
15°	2385	2406	2430
20°	2362	2394	2424
25°	2337	2373	2416
30°	2306	2354	2407
35°	2270	2333	2399
40°	2240	2313	2391
45°	2207	2291	2384
50°	2158	2269	2384
55°	2112	2248	2390
60°	2049	2228	2407
65°	1962	2193	2424
70°	1835	2156	2453
75°	1632	2125	2533
80°	1342	2135	2755
85°	914	2378	3040

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°

Vertical Angle: 85°

Luminance: 3040 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	150.0	3.2
10°-20°	429.4	9.1
20°-30°	649.3	13.8
30°-40°	783.6	16.7
40°-50°	819.3	17.4
50°-60°	755.9	16.1
60°-70°	601.1	12.8
70°-80°	379.4	8.1
80°-90°	133.0	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°	1228.7	26.1
0°-40°	2012.3	42.8
0°-60°	3587.5	76.3
0°-90°	4701.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4701.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1585	1585	1585	1585	1585	
5°	1570	1582	1574	1578	1582	149
15°	1504	1521	1517	1529	1533	424
25°	1383	1404	1404	1422	1430	637
35°	1214	1240	1248	1272	1283	761
45°	1019	1041	1058	1089	1101	785
55°	791	814	842	882	895	707
65°	541	566	605	656	669	535
75°	276	307	359	412	428	293
85°	52	86	135	168	173	66
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1584.7	1584.7	1584.7	1584.7	1584.7
2.5°	1578.2	1588.6	1579.5	1584.7	1583.4
5°	1570.4	1582.1	1574.3	1578.2	1582.1
7.5°	1561.3	1574.3	1565.2	1571.7	1576.9
10°	1547.0	1560.0	1552.2	1560.0	1563.9
12.5°	1527.5	1543.1	1537.9	1547.0	1550.9
15°	1504.1	1521.0	1517.1	1528.8	1532.7
17.5°	1479.3	1497.5	1494.9	1508.0	1511.9
20°	1449.4	1470.2	1468.9	1481.9	1487.1
22.5°	1418.2	1439.0	1437.7	1452.0	1458.5
25°	1383.1	1403.9	1403.9	1422.1	1429.9
27.5°	1344.0	1367.4	1368.7	1387.0	1393.5
30°	1303.7	1327.1	1331.0	1350.5	1360.9
32.5°	1262.1	1284.2	1290.7	1312.8	1320.6
35°	1213.9	1239.9	1247.7	1272.5	1282.9
37.5°	1169.7	1193.1	1203.5	1229.5	1239.9
40°	1120.2	1145.0	1156.7	1185.3	1195.7
42.5°	1069.5	1094.2	1107.2	1138.5	1148.9
45°	1018.8	1040.9	1057.8	1089.0	1100.7
47.5°	962.8	987.5	1005.7	1039.6	1051.3
50°	905.6	931.6	952.4	988.8	1000.5
52.5°	850.9	874.3	897.7	938.1	951.1
55°	791.1	814.5	841.8	882.1	895.1
57.5°	729.9	753.3	784.6	827.5	841.8
60°	668.8	692.2	727.3	771.5	785.9
62.5°	605.0	628.4	667.5	713.0	726.0
65°	541.3	566.0	605.0	655.7	668.8
67.5°	476.2	500.9	542.6	595.9	610.2
70°	409.8	437.2	481.4	534.7	547.8
72.5°	340.9	372.1	421.6	473.6	489.2
75°	275.8	307.1	359.1	412.4	428.1
77.5°	212.1	247.2	299.2	355.2	372.1
80°	152.2	187.4	242.0	296.6	312.3
82.5°	97.6	134.0	188.7	240.7	253.7
85°	52.0	85.9	135.3	167.8	173.0
87.5°	16.9	44.2	61.2	80.7	82.0
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	14.64	16.31	15.00	16.62	16.94	15.36	17.03	15.72	17.34	17.66
	3H	16.42	17.94	16.80	18.27	18.63	17.53	19.04	17.90	19.37	19.73
	4H	17.06	18.49	17.45	18.83	19.21	18.46	19.89	18.86	20.24	20.61
	6H	17.48	18.81	17.89	19.17	19.56	19.32	20.65	19.73	21.01	21.40
	8H	17.59	18.86	18.01	19.25	19.65	19.70	20.97	20.12	21.36	21.76
	12H	17.65	18.87	18.08	19.25	19.68	20.01	21.23	20.44	21.61	22.04
4H	2H	15.40	16.83	15.80	17.18	17.56	15.96	17.39	16.36	17.74	18.12
	3H	17.42	18.63	17.83	19.03	19.43	18.37	19.58	18.78	19.98	20.38
	4H	18.19	19.29	18.62	19.70	20.13	19.48	20.58	19.91	20.99	21.42
	6H	18.74	19.71	19.19	20.14	20.60	20.52	21.48	20.97	21.92	22.38
	8H	18.90	19.80	19.36	20.24	20.71	20.98	21.89	21.44	22.33	22.79
	12H	19.00	19.81	19.48	20.29	20.75	21.38	22.19	21.86	22.67	23.14
8H	4H	18.67	19.58	19.13	20.02	20.48	19.79	20.70	20.25	21.14	21.60
	6H	19.38	20.14	19.88	20.63	21.10	21.01	21.77	21.50	22.25	22.73
	8H	19.63	20.31	20.13	20.81	21.29	21.61	22.29	22.12	22.79	23.28
	12H	19.80	20.40	20.30	20.89	21.45	22.15	22.76	22.66	23.24	23.80
12H	4H	18.78	19.59	19.26	20.07	20.54	19.83	20.64	20.30	21.12	21.58
	6H	19.54	20.23	20.05	20.73	21.21	21.08	21.76	21.58	22.26	22.75
	8H	19.87	20.47	20.37	20.96	21.52	21.75	22.35	22.26	22.84	23.40