

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: P1588662

Luminaire Tested: 24CZSP-A-49HE-L930-S

Issue Date: 9/3/2026

Test Information

Test Method: LM-79-2019
Report Number: P1588662
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-L930-S
Description: 2x4 CZSP LED Luminaire, 3000K CCT and 4500 lumens, 90CRI, Smooth Lens, Air Vented Housing
Light Source: -
Ballast/Driver: -

Summary

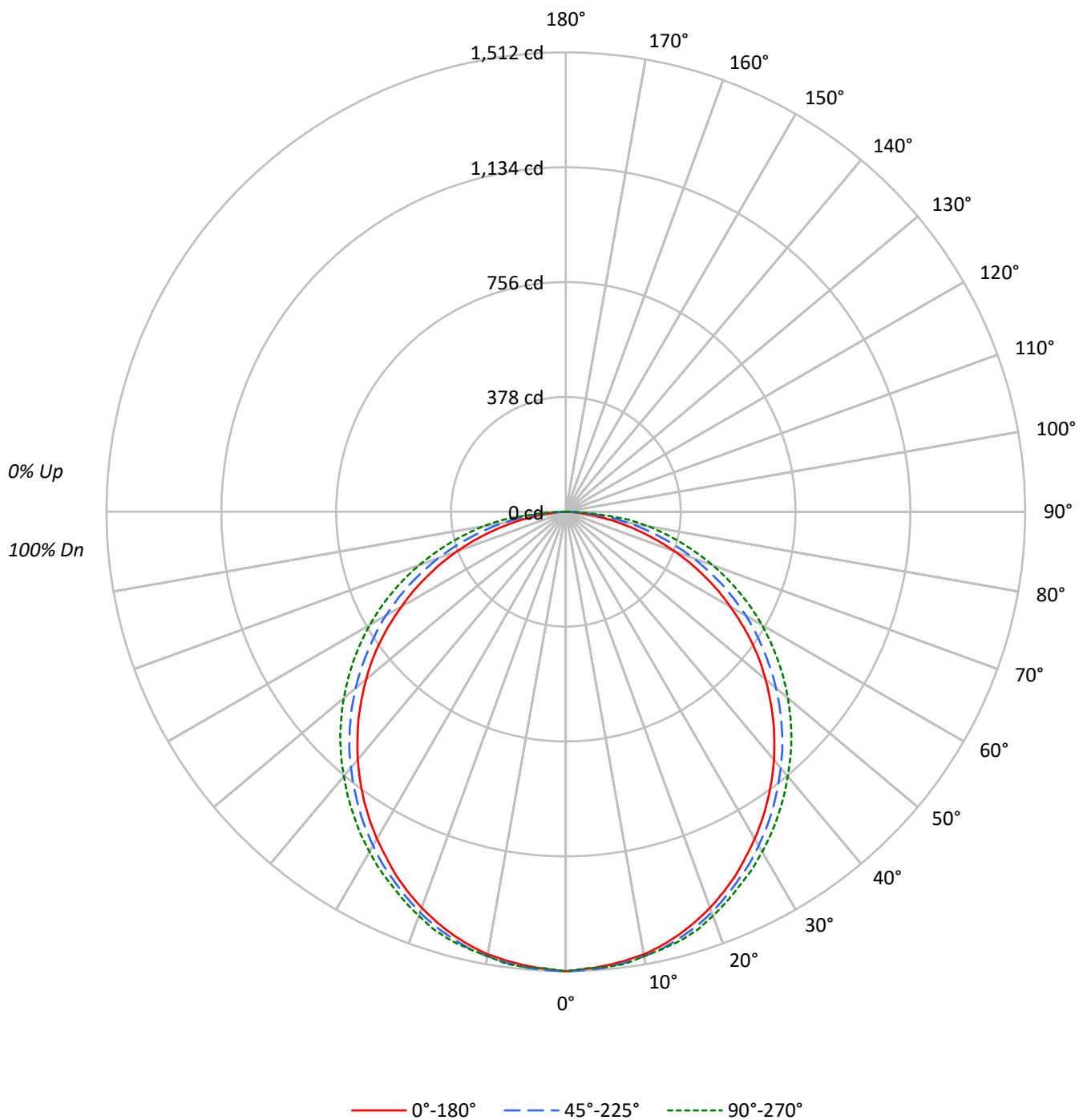
Lumens per Lamp: N/A
Luminaire Lumens: 4415.0 lumens
Efficiency: N/A
Efficacy: 132.6 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.27 / 1.37
Luminous Opening: Rectangular (W 1.83' x L: 3.83' x H: 0')
CIE Type: Direct

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°	2316	2316	2316
5°	2306	2315	2313
10°	2301	2311	2310
15°	2284	2303	2316
20°	2261	2288	2307
25°	2233	2264	2292
30°	2198	2244	2286
35°	2167	2223	2279
40°	2131	2200	2272
45°	2090	2178	2275
50°	2045	2151	2274
55°	1992	2121	2276
60°	1917	2098	2282
65°	1829	2057	2289
70°	1705	2000	2299
75°	1519	1920	2322
80°	1256	1828	2435
85°	817	1652	2128

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°

Vertical Angle: 82.5°

Luminance: 2512 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	143.0	3.2
10°-20°	409.5	9.3
20°-30°	617.6	14.0
30°-40°	743.9	16.8
40°-50°	776.9	17.6
50°-60°	713.5	16.2
60°-70°	562.0	12.7
70°-80°	344.8	7.8
80°-90°	103.8	2.4
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°	1170.2	26.5
0°-40°	1914.1	43.4
0°-60°	3404.5	77.1
0°-90°	4415.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4415.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1512	1512	1512	1512	1512	
5°	1500	1502	1506	1510	1504	143
15°	1441	1444	1452	1461	1461	406
25°	1321	1324	1340	1356	1356	608
35°	1159	1164	1189	1213	1219	725
45°	965	976	1006	1040	1050	744
55°	746	760	794	839	852	666
65°	505	522	568	615	632	499
75°	257	277	324	376	392	272
85°	46	64	94	119	121	61
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1512.3	1512.3	1512.3	1512.3	1512.3
2.5°	1506.4	1509.3	1510.3	1511.3	1504.5
5°	1499.7	1501.6	1505.5	1510.3	1504.5
7.5°	1490.0	1491.9	1496.8	1503.5	1500.6
10°	1479.3	1480.3	1486.1	1490.9	1485.1
12.5°	1461.9	1464.8	1471.6	1475.4	1473.5
15°	1440.6	1443.5	1452.2	1460.9	1460.9
17.5°	1415.4	1419.3	1429.9	1441.5	1442.5
20°	1387.3	1390.2	1403.8	1415.4	1415.4
22.5°	1355.3	1359.2	1372.8	1385.3	1387.3
25°	1321.4	1324.3	1339.8	1356.3	1356.3
27.5°	1281.7	1287.5	1306.9	1323.3	1327.2
30°	1242.9	1247.8	1269.1	1289.4	1292.3
32.5°	1202.2	1208.1	1230.3	1252.6	1257.5
35°	1158.7	1164.5	1188.7	1212.9	1218.7
37.5°	1113.1	1119.9	1145.1	1173.2	1179.0
40°	1065.7	1073.4	1100.5	1130.6	1136.4
42.5°	1015.3	1025.9	1055.0	1086.0	1094.7
45°	964.9	975.6	1005.6	1040.5	1050.2
47.5°	911.6	924.2	955.2	992.0	1002.7
50°	858.3	870.9	902.9	942.6	954.2
52.5°	804.1	816.7	849.6	891.3	903.9
55°	746.0	759.5	794.4	839.0	852.5
57.5°	685.9	703.3	740.1	785.7	799.2
60°	625.8	643.3	684.9	729.5	745.0
62.5°	566.7	583.2	625.8	673.3	689.8
65°	504.7	522.2	567.7	615.2	631.6
67.5°	443.7	461.1	506.7	556.1	573.5
70°	380.7	400.1	446.6	496.0	513.4
72.5°	317.8	338.1	385.6	435.9	452.4
75°	256.7	277.1	324.5	375.9	392.4
77.5°	196.7	218.9	265.4	317.8	333.3
80°	142.4	163.7	207.3	258.7	276.1
82.5°	91.1	109.5	153.1	201.5	214.1
85°	46.5	63.9	94.0	119.2	121.1
87.5°	14.5	20.3	31.0	46.5	47.5
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	14.40	16.06	14.76	16.37	16.69	15.23	16.89	15.59	17.20	17.52
	3H	16.15	17.66	16.53	17.98	18.34	17.34	18.85	17.72	19.18	19.54
	4H	16.77	18.19	17.17	18.54	18.91	18.23	19.65	18.63	20.00	20.38
	6H	17.18	18.50	17.59	18.87	19.26	19.01	20.33	19.42	20.70	21.09
	8H	17.29	18.55	17.71	18.94	19.34	19.33	20.60	19.76	20.98	21.38
	12H	17.34	18.55	17.77	18.93	19.36	19.54	20.76	19.97	21.14	21.56
4H	2H	15.17	16.59	15.57	16.94	17.31	15.81	17.24	16.21	17.58	17.96
	3H	17.14	18.34	17.55	18.74	19.14	18.17	19.37	18.58	19.76	20.16
	4H	17.88	18.97	18.31	19.38	19.82	19.22	20.31	19.65	20.72	21.15
	6H	18.41	19.36	18.86	19.80	20.26	20.17	21.13	20.63	21.57	22.02
	8H	18.56	19.45	19.02	19.89	20.35	20.57	21.46	21.03	21.90	22.37
	12H	18.64	19.44	19.12	19.92	20.39	20.85	21.65	21.33	22.13	22.59
8H	4H	18.34	19.23	18.80	19.67	20.14	19.51	20.40	19.97	20.84	21.31
	6H	19.00	19.75	19.49	20.23	20.71	20.62	21.37	21.11	21.85	22.33
	8H	19.21	19.88	19.72	20.39	20.87	21.13	21.80	21.64	22.31	22.79
	12H	19.35	19.94	19.86	20.43	20.99	21.52	22.11	22.03	22.60	23.16
12H	4H	18.43	19.23	18.91	19.71	20.18	19.53	20.34	20.01	20.81	21.28
	6H	19.13	19.80	19.64	20.31	20.79	20.67	21.34	21.18	21.84	22.33
	8H	19.41	20.00	19.92	20.49	21.05	21.25	21.84	21.75	22.33	22.89