

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: P1588323

Luminaire Tested: 24CZSP-49HE-L930

Issue Date: 9/3/2026

Test Information

Test Method: LM-79-2019
Report Number: P1588323
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-L930
Description: 2x4 CZSP LED Luminaire, 3000K CCT and 4500 lumens, 90CRI, Ribbed Lens
Light Source: -
Ballast/Driver: -

Summary

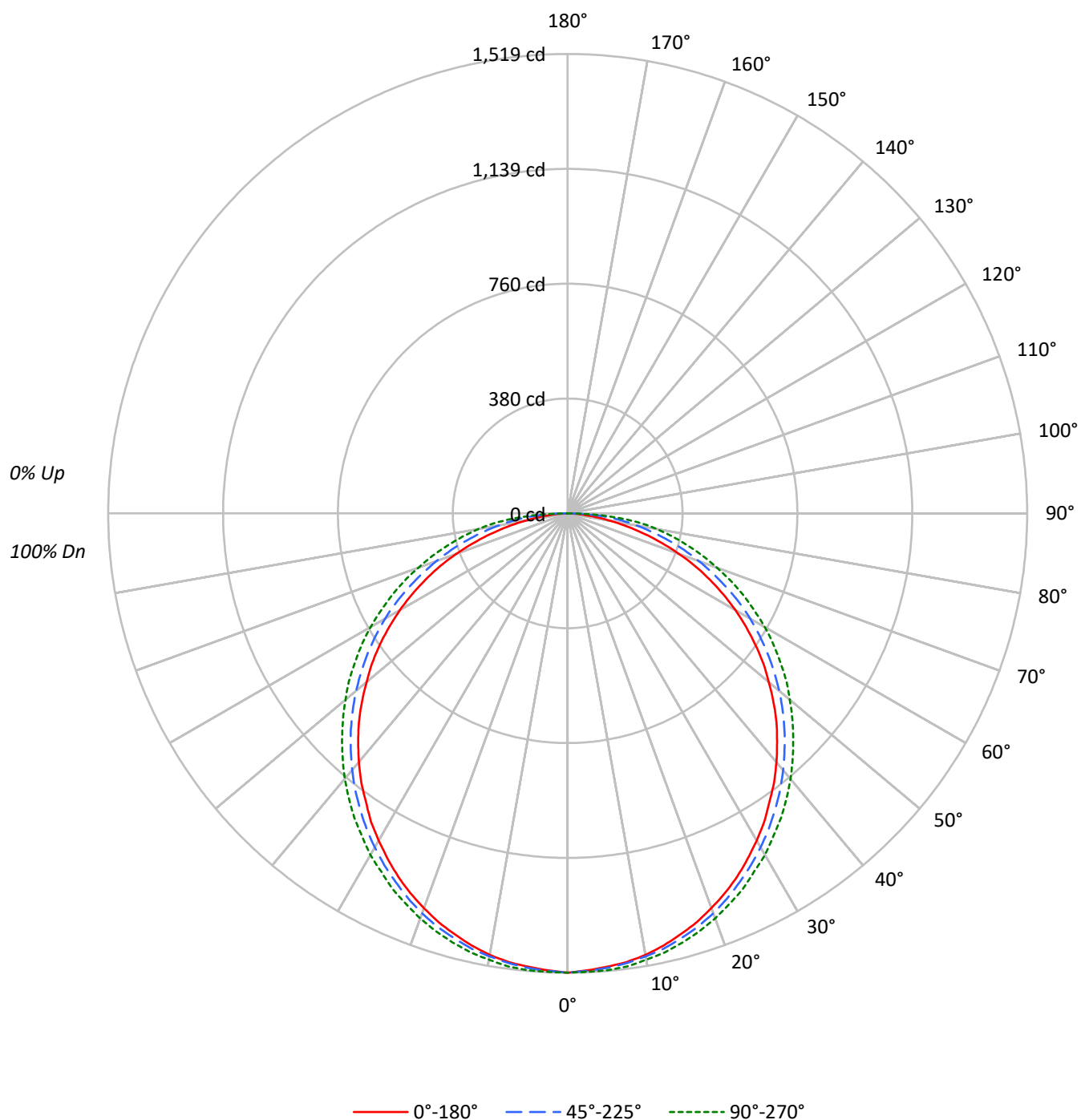
Lumens per Lamp: N/A
Luminaire Lumens: 4505.0 lumens
Efficiency: N/A
Efficacy: 135.3 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.27 / 1.38
Luminous Opening: Rectangular (W 1.83' x L: 3.83' x H: 0')
CIE Type: Direct

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			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°	2326	2326	2326
5°	2314	2320	2331
10°	2306	2313	2331
15°	2285	2305	2329
20°	2264	2294	2323
25°	2240	2274	2316
30°	2209	2256	2307
35°	2175	2236	2299
40°	2146	2216	2291
45°	2115	2196	2285
50°	2068	2175	2285
55°	2024	2154	2291
60°	1963	2135	2307
65°	1880	2101	2323
70°	1759	2066	2351
75°	1564	2036	2427
80°	1287	2045	2639
85°	877	2279	2914

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°

Vertical Angle: 85°

Luminance: 2914 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	143.7	3.2
10°-20°	411.5	9.1
20°-30°	622.3	13.8
30°-40°	750.9	16.7
40°-50°	785.2	17.4
50°-60°	724.4	16.1
60°-70°	576.0	12.8
70°-80°	363.5	8.1
80°-90°	127.5	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°	1177.5	26.1
0°-40°	1928.4	42.8
0°-60°	3438.0	76.3
0°-90°	4505.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4505.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1519	1519	1519	1519	1519	
5°	1505	1516	1509	1512	1516	143
15°	1441	1458	1454	1465	1469	407
25°	1325	1345	1345	1363	1370	610
35°	1163	1188	1196	1219	1229	729
45°	976	998	1014	1044	1055	752
55°	758	780	807	845	858	677
65°	519	542	580	628	641	513
75°	264	294	344	395	410	280
85°	50	82	130	161	166	63
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1518.7	1518.7	1518.7	1518.7	1518.7
2.5°	1512.4	1522.4	1513.7	1518.7	1517.4
5°	1504.9	1516.2	1508.7	1512.4	1516.2
7.5°	1496.2	1508.7	1499.9	1506.2	1511.2
10°	1482.5	1495.0	1487.5	1495.0	1498.7
12.5°	1463.8	1478.8	1473.8	1482.5	1486.2
15°	1441.3	1457.6	1453.8	1465.0	1468.8
17.5°	1417.7	1435.1	1432.6	1445.1	1448.8
20°	1389.0	1408.9	1407.7	1420.2	1425.1
22.5°	1359.1	1379.0	1377.8	1391.5	1397.7
25°	1325.4	1345.3	1345.3	1362.8	1370.3
27.5°	1288.0	1310.4	1311.7	1329.1	1335.4
30°	1249.3	1271.8	1275.5	1294.2	1304.2
32.5°	1209.4	1230.6	1236.9	1258.1	1265.5
35°	1163.3	1188.2	1195.7	1219.4	1229.4
37.5°	1120.9	1143.4	1153.3	1178.3	1188.2
40°	1073.5	1097.2	1108.4	1135.9	1145.8
42.5°	1024.9	1048.6	1061.1	1091.0	1101.0
45°	976.3	997.5	1013.7	1043.6	1054.8
47.5°	922.7	946.4	963.8	996.2	1007.4
50°	867.8	892.7	912.7	947.6	958.8
52.5°	815.4	837.9	860.3	899.0	911.4
55°	758.1	780.5	806.7	845.4	857.8
57.5°	699.5	721.9	751.8	793.0	806.7
60°	640.9	663.3	697.0	739.4	753.1
62.5°	579.8	602.2	639.6	683.3	695.7
65°	518.7	542.4	579.8	628.4	640.9
67.5°	456.3	480.0	519.9	571.1	584.8
70°	392.8	418.9	461.3	512.5	524.9
72.5°	326.7	356.6	404.0	453.8	468.8
75°	264.3	294.3	344.1	395.2	410.2
77.5°	203.2	236.9	286.8	340.4	356.6
80°	145.9	179.5	231.9	284.3	299.2
82.5°	93.5	128.4	180.8	230.7	243.1
85°	49.9	82.3	129.7	160.8	165.8
87.5°	16.2	42.4	58.6	77.3	78.6
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	14.49	16.16	14.85	16.48	16.79	15.21	16.88	15.58	17.20	17.51
	3H	16.28	17.79	16.65	18.12	18.48	17.38	18.89	17.75	19.22	19.58
	4H	16.91	18.34	17.30	18.69	19.06	18.31	19.74	18.71	20.09	20.47
	6H	17.33	18.66	17.74	19.02	19.41	19.17	20.50	19.58	20.87	21.26
	8H	17.44	18.72	17.87	19.10	19.50	19.55	20.82	19.97	21.21	21.61
	12H	17.50	18.72	17.93	19.10	19.53	19.86	21.08	20.29	21.46	21.89
4H	2H	15.25	16.69	15.65	17.03	17.41	15.81	17.25	16.21	17.59	17.97
	3H	17.28	18.49	17.69	18.88	19.28	18.23	19.44	18.64	19.83	20.23
	4H	18.04	19.14	18.47	19.55	19.98	19.33	20.43	19.76	20.84	21.27
	6H	18.59	19.56	19.05	20.00	20.45	20.37	21.33	20.82	21.77	22.23
	8H	18.75	19.66	19.21	20.10	20.56	20.83	21.74	21.29	22.18	22.64
	12H	18.85	19.67	19.33	20.14	20.61	21.23	22.05	21.71	22.52	22.99
8H	4H	18.53	19.43	18.99	19.87	20.34	19.65	20.55	20.10	20.99	21.46
	6H	19.24	19.99	19.73	20.48	20.95	20.86	21.62	21.36	22.11	22.58
	8H	19.48	20.16	19.98	20.66	21.15	21.46	22.14	21.97	22.65	23.13
	12H	19.65	20.25	20.15	20.74	21.30	22.00	22.61	22.51	23.10	23.65
12H	4H	18.63	19.45	19.11	19.92	20.39	19.68	20.49	20.16	20.97	21.44
	6H	19.40	20.08	19.90	20.58	21.07	20.93	21.61	21.43	22.11	22.60
	8H	19.72	20.32	20.23	20.81	21.37	21.60	22.21	22.11	22.70	23.25