

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: P1588324

Luminaire Tested: 24CZSP-49HE-L935-S

Issue Date: 9/3/2026

Test Information

Test Method: LM-79-2019
Report Number: P1588324
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-49HE-L935-S
Description: 2x4 CZSP LED Luminaire, 3500K CCT and 4500 lumens, 90CRI, Smooth Lens
Light Source: -
Ballast/Driver: -

Summary

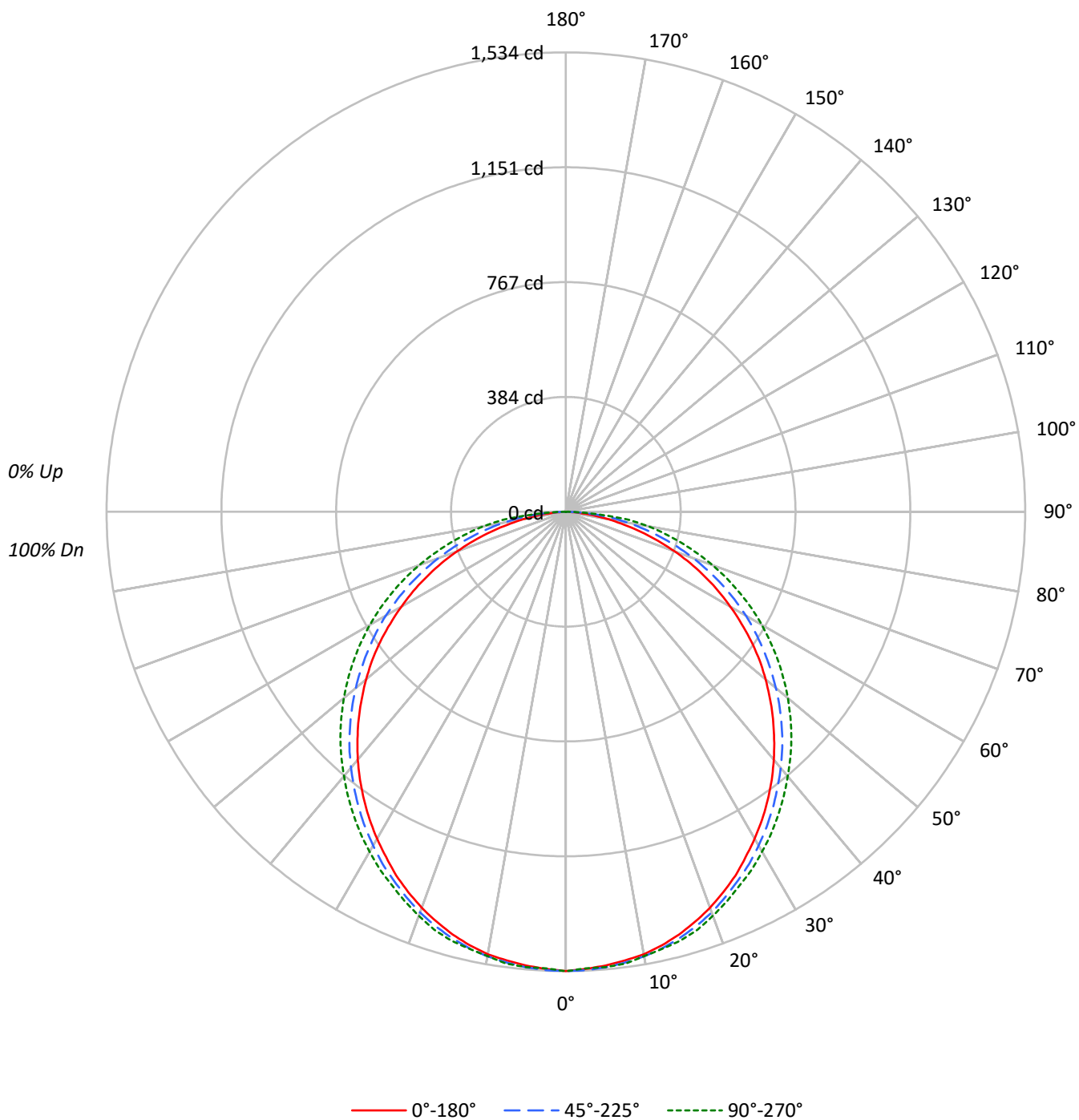
Lumens per Lamp: N/A
Luminaire Lumens: 4478.0 lumens
Efficiency: N/A
Efficacy: 134.5 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.27 / 1.37
Luminous Opening: Rectangular (W 1.83' x L: 3.83' x H: 0')
CIE Type: Direct

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°	2349	2349	2349
5°	2339	2348	2346
10°	2334	2344	2343
15°	2317	2336	2350
20°	2293	2321	2340
25°	2265	2296	2325
30°	2230	2277	2318
35°	2197	2254	2311
40°	2161	2232	2305
45°	2120	2209	2307
50°	2074	2182	2306
55°	2020	2151	2309
60°	1945	2128	2315
65°	1855	2087	2322
70°	1729	2029	2332
75°	1541	1948	2355
80°	1274	1855	2470
85°	829	1675	2158

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°

Vertical Angle: 82.5°

Luminance: 2549 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	145.1	3.2
10°-20°	415.4	9.3
20°-30°	626.4	14.0
30°-40°	754.5	16.8
40°-50°	788.0	17.6
50°-60°	723.7	16.2
60°-70°	570.0	12.7
70°-80°	349.7	7.8
80°-90°	105.2	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°	1186.9	26.5
0°-40°	1941.4	43.4
0°-60°	3453.1	77.1
0°-90°	4478.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4478.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1534	1534	1534	1534	1534	
5°	1521	1523	1527	1532	1526	145
15°	1461	1464	1473	1482	1482	412
25°	1340	1343	1359	1376	1376	617
35°	1175	1181	1206	1230	1236	735
45°	979	990	1020	1055	1065	755
55°	757	770	806	851	865	675
65°	512	530	576	624	641	506
75°	260	281	329	381	398	276
85°	47	65	95	121	123	62
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1533.8	1533.8	1533.8	1533.8	1533.8
2.5°	1527.9	1530.9	1531.9	1532.9	1526.0
5°	1521.1	1523.0	1527.0	1531.9	1526.0
7.5°	1511.2	1513.2	1518.1	1525.0	1522.0
10°	1500.4	1501.4	1507.3	1512.2	1506.3
12.5°	1482.7	1485.7	1492.6	1496.5	1494.5
15°	1461.1	1464.1	1472.9	1481.8	1481.8
17.5°	1435.6	1439.5	1450.3	1462.1	1463.1
20°	1407.1	1410.0	1423.8	1435.6	1435.6
22.5°	1374.7	1378.6	1392.3	1405.1	1407.1
25°	1340.3	1343.2	1358.9	1375.6	1375.6
27.5°	1300.0	1305.9	1325.5	1342.2	1346.2
30°	1260.7	1265.6	1287.2	1307.8	1310.8
32.5°	1219.4	1225.3	1247.9	1270.5	1275.4
35°	1175.2	1181.1	1205.6	1230.2	1236.1
37.5°	1129.0	1135.9	1161.4	1189.9	1195.8
40°	1080.9	1088.7	1116.2	1146.7	1152.6
42.5°	1029.8	1040.6	1070.0	1101.5	1110.3
45°	978.7	989.5	1019.9	1055.3	1065.1
47.5°	924.6	937.4	968.8	1006.2	1017.0
50°	870.6	883.4	915.8	956.1	967.9
52.5°	815.6	828.3	861.7	904.0	916.8
55°	756.6	770.4	805.7	850.9	864.7
57.5°	695.7	713.4	750.7	796.9	810.6
60°	634.8	652.4	694.7	739.9	755.6
62.5°	574.8	591.5	634.8	682.9	699.6
65°	511.9	529.6	575.8	623.9	640.7
67.5°	450.0	467.7	513.9	564.0	581.7
70°	386.2	405.8	453.0	503.1	520.8
72.5°	322.3	342.9	391.1	442.2	458.9
75°	260.4	281.0	329.2	381.2	398.0
77.5°	199.5	222.1	269.2	322.3	338.0
80°	144.4	166.1	210.3	262.4	280.0
82.5°	92.4	111.0	155.3	204.4	217.2
85°	47.2	64.9	95.3	120.9	122.8
87.5°	14.7	20.6	31.4	47.2	48.1
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	14.45	16.11	14.81	16.42	16.74	15.28	16.94	15.64	17.25	17.57
	3H	16.20	17.71	16.58	18.03	18.39	17.39	18.90	17.77	19.23	19.59
	4H	16.82	18.24	17.22	18.59	18.96	18.28	19.70	18.68	20.05	20.43
	6H	17.23	18.55	17.64	18.91	19.31	19.06	20.38	19.47	20.75	21.14
	8H	17.34	18.60	17.76	18.99	19.39	19.38	20.64	19.81	21.03	21.43
	12H	17.39	18.60	17.82	18.98	19.41	19.59	20.80	20.02	21.19	21.61
4H	2H	15.22	16.64	15.62	16.99	17.36	15.86	17.29	16.26	17.63	18.01
	3H	17.19	18.39	17.60	18.79	19.19	18.22	19.42	18.63	19.81	20.21
	4H	17.93	19.02	18.36	19.43	19.86	19.27	20.36	19.70	20.77	21.20
	6H	18.46	19.41	18.91	19.85	20.31	20.22	21.18	20.68	21.61	22.07
	8H	18.61	19.50	19.07	19.94	20.40	20.62	21.51	21.08	21.95	22.42
	12H	18.69	19.49	19.17	19.97	20.44	20.90	21.70	21.38	22.17	22.64
8H	4H	18.39	19.28	18.85	19.72	20.19	19.56	20.45	20.02	20.89	21.36
	6H	19.05	19.80	19.54	20.28	20.76	20.67	21.42	21.16	21.90	22.38
	8H	19.26	19.93	19.77	20.44	20.92	21.18	21.85	21.69	22.36	22.84
	12H	19.40	19.99	19.91	20.48	21.04	21.57	22.16	22.07	22.65	23.21
12H	4H	18.48	19.28	18.96	19.76	20.23	19.58	20.39	20.06	20.86	21.33
	6H	19.18	19.85	19.69	20.36	20.84	20.72	21.39	21.23	21.89	22.38
	8H	19.46	20.05	19.97	20.54	21.10	21.30	21.89	21.80	22.38	22.94