

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: P1588666

Luminaire Tested: 24CZSP-A-49HE-L940-S

Issue Date: 9/3/2026

Test Information

Test Method: LM-79-2019
Report Number: P1588666
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-L940-S
Description: 2x4 CZSP LED Luminaire, 4000K CCT and 4500 lumens, 90CRI, Smooth Lens, Air Vented Housing
Light Source: -
Ballast/Driver: -

Summary

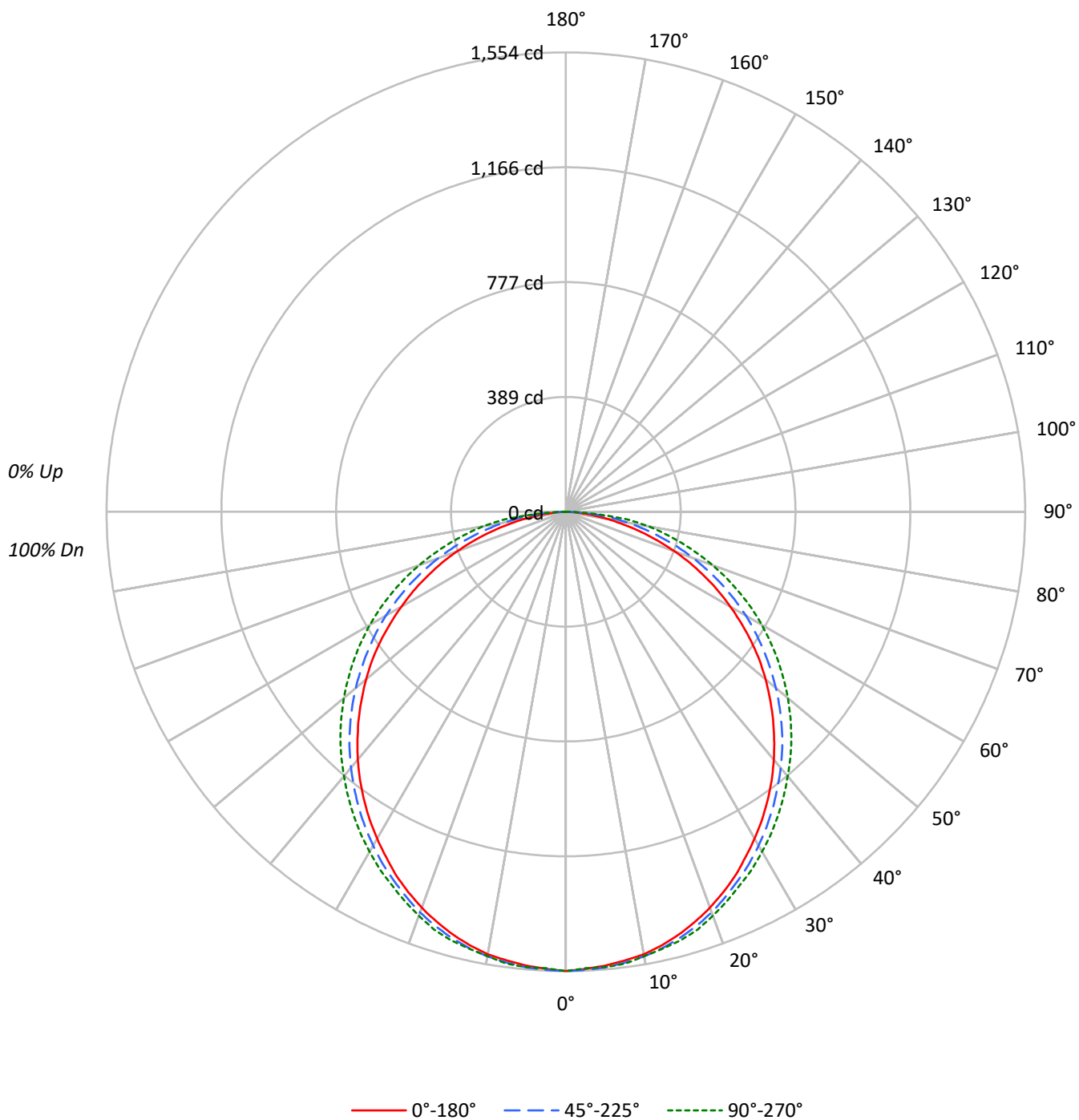
Lumens per Lamp: N/A
Luminaire Lumens: 4536.0 lumens
Efficiency: N/A
Efficacy: 136.2 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.27 / 1.37
Luminous Opening: Rectangular (W 1.83' x L: 3.83' x H: 0')
CIE Type: Direct

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°	2380	2380	2380
5°	2369	2378	2376
10°	2364	2375	2373
15°	2347	2366	2380
20°	2323	2351	2370
25°	2294	2326	2355
30°	2258	2306	2348
35°	2226	2284	2341
40°	2189	2261	2334
45°	2147	2238	2337
50°	2101	2210	2336
55°	2047	2180	2339
60°	1970	2156	2345
65°	1879	2114	2352
70°	1752	2055	2362
75°	1561	1973	2385
80°	1290	1879	2502
85°	840	1696	2186

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°

Vertical Angle: 82.5°

Luminance: 2582 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	146.9	3.2
10°-20°	420.7	9.3
20°-30°	634.6	14.0
30°-40°	764.3	16.8
40°-50°	798.2	17.6
50°-60°	733.1	16.2
60°-70°	577.4	12.7
70°-80°	354.2	7.8
80°-90°	106.6	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°	1202.2	26.5
0°-40°	1966.6	43.4
0°-60°	3497.8	77.1
0°-90°	4536.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4536.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1554	1554	1554	1554	1554	
5°	1541	1543	1547	1552	1546	146
15°	1480	1483	1492	1501	1501	417
25°	1358	1361	1376	1394	1394	625
35°	1190	1196	1221	1246	1252	745
45°	991	1002	1033	1069	1079	764
55°	766	780	816	862	876	684
65°	519	536	583	632	649	513
75°	264	285	333	386	403	280
85°	48	66	96	122	124	62
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1553.7	1553.7	1553.7	1553.7	1553.7
2.5°	1547.7	1550.7	1551.7	1552.7	1545.7
5°	1540.8	1542.8	1546.7	1551.7	1545.7
7.5°	1530.8	1532.8	1537.8	1544.7	1541.8
10°	1519.9	1520.9	1526.8	1531.8	1525.8
12.5°	1501.9	1504.9	1511.9	1515.9	1513.9
15°	1480.0	1483.0	1492.0	1500.9	1500.9
17.5°	1454.2	1458.1	1469.1	1481.0	1482.0
20°	1425.3	1428.3	1442.2	1454.2	1454.2
22.5°	1392.5	1396.4	1410.4	1423.3	1425.3
25°	1357.6	1360.6	1376.5	1393.5	1393.5
27.5°	1316.8	1322.8	1342.7	1359.6	1363.6
30°	1277.0	1282.0	1303.9	1324.8	1327.8
32.5°	1235.2	1241.2	1264.1	1287.0	1291.9
35°	1190.4	1196.4	1221.3	1246.1	1252.1
37.5°	1143.6	1150.6	1176.5	1205.3	1211.3
40°	1094.9	1102.8	1130.7	1161.5	1167.5
42.5°	1043.1	1054.0	1083.9	1115.8	1124.7
45°	991.3	1002.3	1033.1	1069.0	1078.9
47.5°	936.6	949.5	981.4	1019.2	1030.2
50°	881.9	894.8	927.6	968.5	980.4
52.5°	826.1	839.1	872.9	915.7	928.6
55°	766.4	780.3	816.2	862.0	875.9
57.5°	704.7	722.6	760.4	807.2	821.1
60°	643.0	660.9	703.7	749.5	765.4
62.5°	582.3	599.2	643.0	691.8	708.7
65°	518.6	536.5	583.3	632.0	649.0
67.5°	455.9	473.8	520.6	571.3	589.2
70°	391.2	411.1	458.8	509.6	527.5
72.5°	326.5	347.4	396.1	447.9	464.8
75°	263.8	284.7	333.4	386.2	403.1
77.5°	202.1	224.9	272.7	326.5	342.4
80°	146.3	168.2	213.0	265.8	283.7
82.5°	93.6	112.5	157.3	207.0	220.0
85°	47.8	65.7	96.5	122.4	124.4
87.5°	14.9	20.9	31.9	47.8	48.8
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	16.15	14.85	16.47	16.78	15.32	16.98	15.68	17.30	17.61
	3H	16.25	17.75	16.62	18.08	18.44	17.44	18.94	17.81	19.27	19.63
	4H	16.86	18.29	17.26	18.63	19.01	18.33	19.75	18.72	20.10	20.47
	6H	17.28	18.60	17.69	18.96	19.35	19.11	20.43	19.52	20.79	21.18
	8H	17.38	18.65	17.81	19.03	19.43	19.43	20.69	19.85	21.08	21.48
	12H	17.44	18.65	17.86	19.03	19.46	19.64	20.85	20.07	21.23	21.66
4H	2H	15.26	16.68	15.66	17.03	17.41	15.91	17.33	16.31	17.68	18.05
	3H	17.24	18.44	17.65	18.83	19.23	18.26	19.46	18.67	19.86	20.26
	4H	17.98	19.06	18.41	19.48	19.91	19.32	20.40	19.75	20.81	21.25
	6H	18.51	19.46	18.96	19.90	20.35	20.27	21.22	20.72	21.66	22.11
	8H	18.65	19.54	19.11	19.98	20.45	20.67	21.56	21.12	22.00	22.46
	12H	18.74	19.54	19.21	20.01	20.48	20.94	21.75	21.42	22.22	22.69
8H	4H	18.44	19.33	18.89	19.77	20.23	19.60	20.50	20.06	20.94	21.40
	6H	19.10	19.84	19.59	20.33	20.80	20.72	21.46	21.21	21.95	22.42
	8H	19.31	19.98	19.81	20.48	20.97	21.23	21.90	21.74	22.40	22.89
	12H	19.45	20.04	19.95	20.53	21.09	21.61	22.21	22.12	22.70	23.25
12H	4H	18.52	19.33	19.00	19.80	20.27	19.63	20.43	20.11	20.91	21.37
	6H	19.23	19.90	19.74	20.40	20.89	20.76	21.43	21.27	21.94	22.42
	8H	19.51	20.10	20.01	20.59	21.15	21.34	21.93	21.85	22.42	22.98