

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: P1588660

Luminaire Tested: 24CZSP-A-49HE-L850-S

Issue Date: 9/3/2026

Test Information

Test Method: LM-79-2019
Report Number: P1588660
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-L850-S
Description: 2x4 CZSP LED Luminaire, 5000K CCT and 4500 lumens, 80CRI, Smooth Lens, Air Vented Housing
Light Source: -
Ballast/Driver: -

Summary

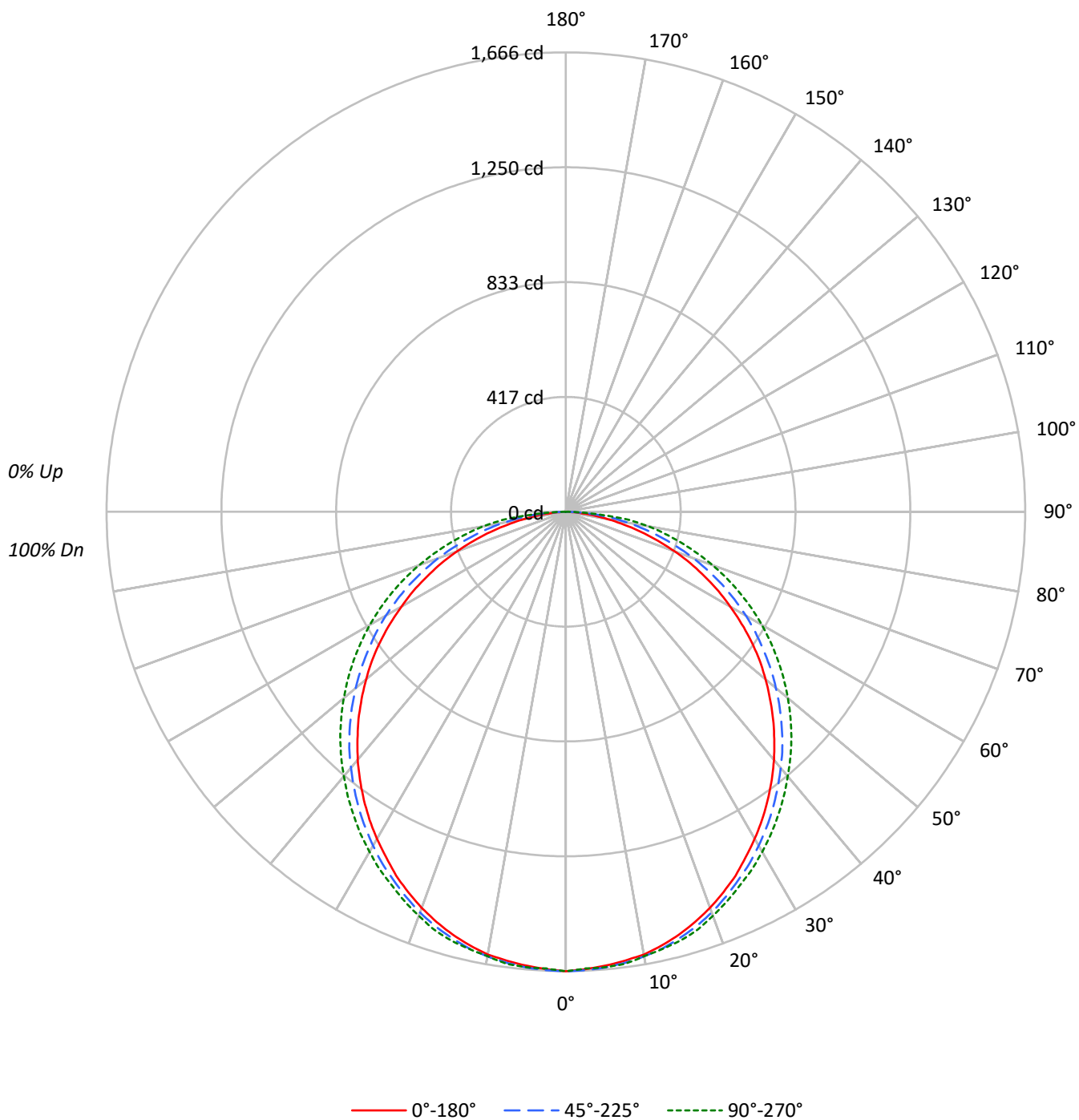
Lumens per Lamp: N/A
Luminaire Lumens: 4865.0 lumens
Efficiency: N/A
Efficacy: 146.1 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.27 / 1.37
Luminous Opening: Rectangular (W 1.83' x L: 3.83' x H: 0')
CIE Type: Direct

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°	2552	2552	2552
5°	2541	2551	2549
10°	2535	2547	2545
15°	2517	2537	2553
20°	2492	2521	2542
25°	2461	2495	2526
30°	2422	2473	2519
35°	2387	2449	2511
40°	2348	2425	2504
45°	2303	2400	2507
50°	2254	2371	2506
55°	2195	2338	2508
60°	2112	2312	2515
65°	2016	2267	2522
70°	1879	2204	2534
75°	1674	2116	2558
80°	1384	2015	2683
85°	900	1819	2344

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°

Vertical Angle: 82.5°

Luminance: 2768 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	157.6	3.2
10°-20°	451.3	9.3
20°-30°	680.6	14.0
30°-40°	819.7	16.8
40°-50°	856.1	17.6
50°-60°	786.2	16.2
60°-70°	619.3	12.7
70°-80°	379.9	7.8
80°-90°	114.3	2.3
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°	1289.4	26.5
0°-40°	2109.2	43.4
0°-60°	3751.5	77.1
0°-90°	4865.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4865.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1666	1666	1666	1666	1666	
5°	1652	1655	1659	1664	1658	157
15°	1587	1591	1600	1610	1610	448
25°	1456	1459	1476	1494	1494	670
35°	1277	1283	1310	1336	1343	799
45°	1063	1075	1108	1146	1157	820
55°	822	837	875	924	939	734
65°	556	575	626	678	696	550
75°	283	305	358	414	432	300
85°	51	70	104	131	133	67
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1666.4	1666.4	1666.4	1666.4	1666.4
2.5°	1660.0	1663.2	1664.3	1665.3	1657.9
5°	1652.5	1654.6	1658.9	1664.3	1657.9
7.5°	1641.8	1644.0	1649.3	1656.8	1653.6
10°	1630.1	1631.2	1637.6	1642.9	1636.5
12.5°	1610.9	1614.1	1621.6	1625.8	1623.7
15°	1587.4	1590.6	1600.2	1609.8	1609.8
17.5°	1559.6	1563.9	1575.7	1588.5	1589.5
20°	1528.7	1531.9	1546.8	1559.6	1559.6
22.5°	1493.5	1497.7	1512.7	1526.5	1528.7
25°	1456.1	1459.3	1476.4	1494.5	1494.5
27.5°	1412.3	1418.7	1440.1	1458.2	1462.5
30°	1369.6	1375.0	1398.4	1420.9	1424.1
32.5°	1324.8	1331.2	1355.7	1380.3	1385.6
35°	1276.7	1283.2	1309.8	1336.5	1342.9
37.5°	1226.6	1234.0	1261.8	1292.8	1299.2
40°	1174.3	1182.8	1212.7	1245.8	1252.2
42.5°	1118.8	1130.5	1162.5	1196.7	1206.3
45°	1063.2	1075.0	1108.1	1146.5	1157.2
47.5°	1004.5	1018.4	1052.6	1093.1	1104.9
50°	945.8	959.7	994.9	1038.7	1051.5
52.5°	886.0	899.9	936.2	982.1	996.0
55°	822.0	836.9	875.4	924.5	939.4
57.5°	755.8	775.0	815.6	865.8	880.7
60°	689.6	708.8	754.7	803.8	820.9
62.5°	624.5	642.6	689.6	741.9	760.1
65°	556.2	575.4	625.6	677.9	696.0
67.5°	488.9	508.1	558.3	612.8	632.0
70°	419.5	440.9	492.1	546.6	565.8
72.5°	350.1	372.6	424.9	480.4	498.5
75°	282.9	305.3	357.6	414.2	432.3
77.5°	216.7	241.3	292.5	350.1	367.2
80°	156.9	180.4	228.4	285.0	304.2
82.5°	100.3	120.6	168.7	222.0	235.9
85°	51.2	70.5	103.5	131.3	133.4
87.5°	16.0	22.4	34.2	51.2	52.3
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	14.73	16.40	15.10	16.71	17.02	15.56	17.23	15.93	17.54	17.85
	3H	16.49	18.00	16.87	18.32	18.68	17.68	19.19	18.06	19.51	19.87
	4H	17.11	18.53	17.51	18.88	19.25	18.57	19.99	18.97	20.34	20.71
	6H	17.52	18.84	17.93	19.20	19.59	19.35	20.67	19.76	21.03	21.42
	8H	17.63	18.89	18.05	19.28	19.68	19.67	20.93	20.09	21.32	21.72
	12H	17.68	18.89	18.11	19.27	19.70	19.88	21.09	20.31	21.47	21.90
4H	2H	15.51	16.93	15.90	17.27	17.65	16.15	17.57	16.55	17.92	18.30
	3H	17.48	18.68	17.89	19.08	19.48	18.51	19.71	18.92	20.10	20.50
	4H	18.22	19.31	18.65	19.72	20.15	19.56	20.65	19.99	21.06	21.49
	6H	18.75	19.70	19.20	20.14	20.59	20.51	21.46	20.96	21.90	22.36
	8H	18.89	19.79	19.35	20.23	20.69	20.91	21.80	21.37	22.24	22.71
	12H	18.98	19.78	19.46	20.26	20.72	21.18	21.99	21.66	22.46	22.93
8H	4H	18.68	19.57	19.14	20.01	20.48	19.85	20.74	20.31	21.18	21.65
	6H	19.34	20.08	19.83	20.57	21.04	20.96	21.70	21.45	22.19	22.66
	8H	19.55	20.22	20.06	20.72	21.21	21.47	22.14	21.98	22.64	23.13
	12H	19.69	20.28	20.19	20.77	21.33	21.86	22.45	22.36	22.94	23.50
12H	4H	18.77	19.57	19.25	20.05	20.51	19.87	20.68	20.35	21.15	21.62
	6H	19.47	20.14	19.98	20.65	21.13	21.01	21.68	21.51	22.18	22.67
	8H	19.75	20.34	20.25	20.83	21.39	21.58	22.18	22.09	22.67	23.22