

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: P1589796

Luminaire Tested: 24CZSP-SB-49HE-L840-S

Issue Date: 9/3/2026

Test Information

Test Method: LM-79-2019
Report Number: P1589796
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2608-884-8)
Test Lab: INNOVATION CENTER
Issue Date: 9/3/2026
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: METALUX
Catalog Number: 24CZSP-SB-49HE-L840-S
Description: 2x4 CZSP LED Luminaire, 4000K CCT and 4500 lumens, 80CRI, Smooth Lens, SB housing
Light Source: -
Ballast/Driver: -

Summary

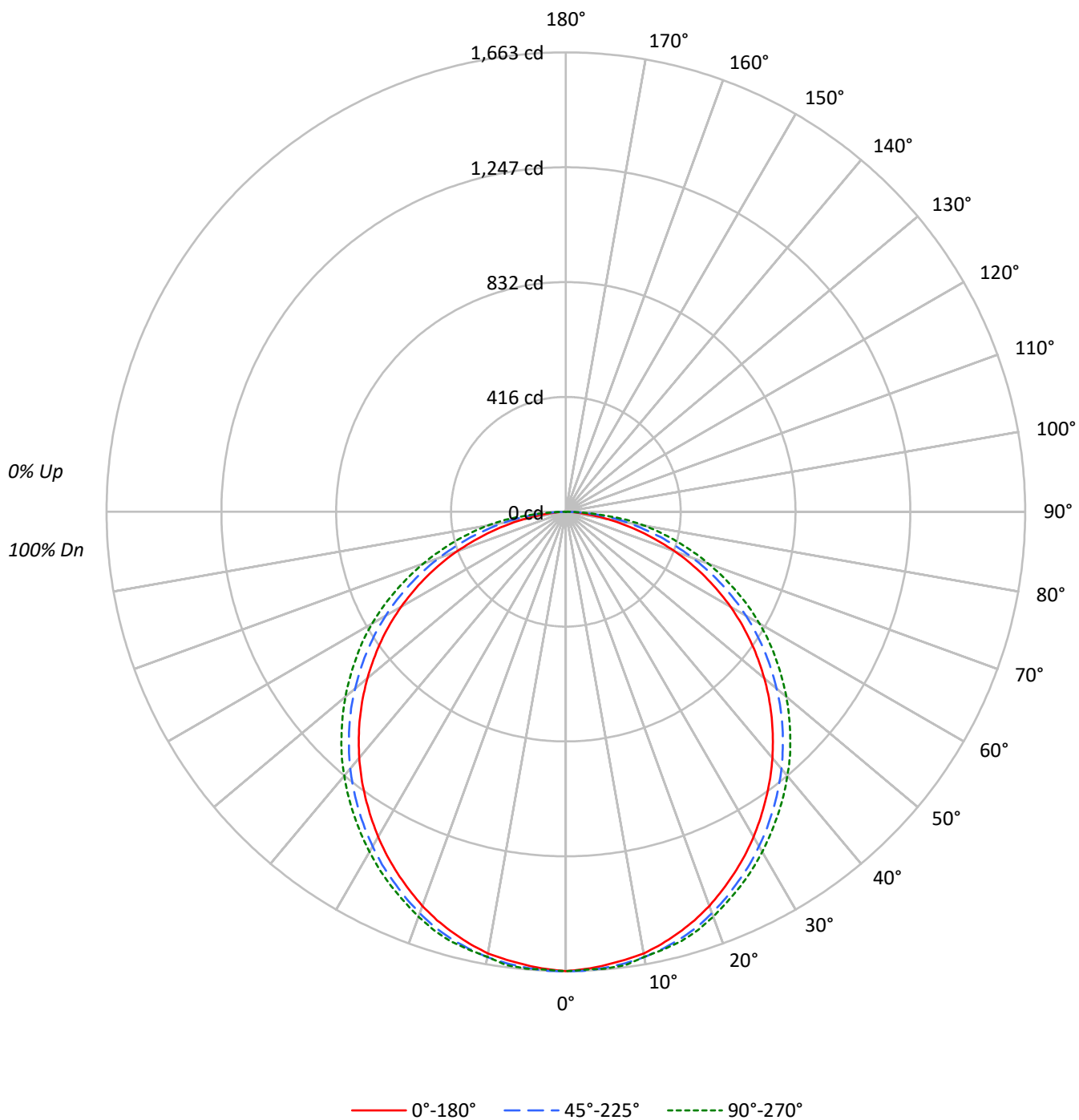
Lumens per Lamp: N/A
Luminaire Lumens: 4838.0 lumens
Efficiency: N/A
Efficacy: 145.3 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.27 / 1.38
Luminous Opening: Rectangular (W 1.83' x L: 3.83' x H: 0')
CIE Type: Direct

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	99	95	106	101	97	93	97	94	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	66	61		69	64	60	58
4	82	70	61	54	79	68	60	53	66	58	53		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	45	39		50	44	39	37
7	64	51	42	35	63	50	41	35	48	41	35		47	40	35		45	39	35	33
8	60	46	38	32	58	45	37	31	44	37	31		43	36	31		42	35	31	29
9	56	42	34	28	54	42	34	28	41	33	28		39	33	28		38	32	28	26
10	52	39	31	26	51	39	31	26	38	30	26		37	30	25		36	30	25	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2547	2547	2547
5°	2533	2547	2552
10°	2525	2546	2545
15°	2502	2538	2553
20°	2475	2521	2543
25°	2439	2496	2528
30°	2404	2474	2514
35°	2364	2450	2503
40°	2326	2428	2495
45°	2284	2403	2489
50°	2234	2373	2482
55°	2179	2343	2479
60°	2111	2308	2480
65°	2014	2259	2467
70°	1883	2191	2461
75°	1669	2106	2469
80°	1358	2001	2543
85°	879	1847	2195

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°

Vertical Angle: 82.5°

Luminance: 2577 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	157.4	3.3
10°-20°	450.7	9.3
20°-30°	679.5	14.0
30°-40°	817.7	16.9
40°-50°	852.9	17.6
50°-60°	781.8	16.2
60°-70°	613.9	12.7
70°-80°	373.6	7.7
80°-90°	110.5	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°	1287.6	26.6
0°-40°	2105.3	43.5
0°-60°	3740.0	77.3
0°-90°	4838.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4838.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1663	1663	1663	1663	1663	
5°	1648	1658	1657	1655	1660	157
15°	1578	1593	1601	1603	1610	445
25°	1444	1463	1477	1486	1496	665
35°	1264	1284	1310	1329	1338	791
45°	1054	1076	1110	1136	1149	813
55°	816	837	877	913	928	729
65°	556	577	623	665	681	550
75°	282	308	356	399	417	299
85°	50	71	105	118	125	65
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1663.1	1663.1	1663.1	1663.1	1663.1
2.5°	1656.9	1665.2	1663.1	1655.9	1659.0
5°	1647.5	1657.9	1656.9	1654.8	1660.0
7.5°	1636.1	1647.5	1648.6	1648.6	1654.8
10°	1623.6	1635.0	1637.1	1634.0	1636.1
12.5°	1602.8	1616.3	1620.5	1620.5	1623.6
15°	1577.8	1593.4	1600.7	1602.8	1610.1
17.5°	1550.7	1567.4	1576.8	1582.0	1588.2
20°	1518.5	1536.2	1546.6	1552.8	1560.1
22.5°	1482.0	1501.8	1513.3	1519.5	1527.8
25°	1443.5	1463.3	1476.8	1486.2	1495.6
27.5°	1402.9	1421.7	1440.4	1451.9	1460.2
30°	1359.2	1379.0	1398.8	1413.4	1421.7
32.5°	1312.4	1333.2	1356.1	1371.7	1381.1
35°	1264.5	1284.3	1310.3	1329.1	1338.4
37.5°	1215.6	1236.4	1263.5	1283.3	1294.7
40°	1163.6	1185.4	1214.6	1236.4	1247.9
42.5°	1109.5	1130.3	1162.5	1187.5	1201.0
45°	1054.3	1076.1	1109.5	1135.5	1149.0
47.5°	997.0	1017.9	1054.3	1084.5	1095.9
50°	937.7	957.5	996.0	1028.3	1041.8
52.5°	877.4	898.2	936.7	971.0	985.6
55°	816.0	836.8	877.4	912.7	928.4
57.5°	753.5	774.3	816.0	852.4	871.1
60°	689.0	709.8	753.5	791.0	809.7
62.5°	622.4	644.2	689.0	727.5	747.3
65°	555.8	576.6	623.4	665.0	680.7
67.5°	489.2	510.0	555.8	597.4	616.1
70°	420.5	444.4	489.2	532.9	549.5
72.5°	348.7	375.7	420.5	466.3	482.9
75°	282.0	308.1	355.9	398.6	417.3
77.5°	216.5	244.6	289.3	333.0	351.8
80°	154.0	181.1	226.9	268.5	288.3
82.5°	97.8	121.8	167.6	205.0	219.6
85°	50.0	70.8	105.1	117.6	124.9
87.5°	14.6	25.0	37.5	46.8	52.0
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	14.75	16.41	15.11	16.72	17.04	15.48	17.14	15.85	17.46	17.77
	3H	16.52	18.02	16.89	18.35	18.71	17.56	19.07	17.94	19.39	19.75
	4H	17.14	18.56	17.53	18.90	19.28	18.43	19.85	18.83	20.19	20.57
	6H	17.54	18.86	17.95	19.23	19.62	19.17	20.49	19.58	20.85	21.24
	8H	17.65	18.91	18.07	19.30	19.69	19.47	20.73	19.89	21.12	21.51
	12H	17.70	18.90	18.13	19.29	19.71	19.66	20.87	20.09	21.25	21.68
4H	2H	15.52	16.94	15.91	17.28	17.66	16.09	17.51	16.49	17.85	18.23
	3H	17.51	18.70	17.92	19.10	19.50	18.40	19.60	18.81	19.99	20.39
	4H	18.25	19.33	18.68	19.75	20.18	19.42	20.50	19.85	20.92	21.35
	6H	18.78	19.73	19.23	20.17	20.62	20.32	21.27	20.78	21.71	22.17
	8H	18.92	19.81	19.38	20.25	20.72	20.69	21.58	21.15	22.02	22.49
	12H	19.00	19.80	19.48	20.28	20.75	20.95	21.75	21.42	22.22	22.69
8H	4H	18.70	19.59	19.15	20.03	20.49	19.72	20.61	20.18	21.05	21.51
	6H	19.36	20.10	19.85	20.59	21.06	20.77	21.52	21.27	22.00	22.48
	8H	19.57	20.23	20.08	20.74	21.22	21.25	21.91	21.75	22.42	22.90
	12H	19.71	20.29	20.21	20.78	21.34	21.60	22.19	22.10	22.68	23.24
12H	4H	18.78	19.58	19.26	20.05	20.52	19.74	20.54	20.22	21.02	21.49
	6H	19.48	20.15	19.99	20.65	21.14	20.83	21.49	21.33	22.00	22.48
	8H	19.76	20.35	20.27	20.84	21.40	21.36	21.95	21.87	22.44	23.00