

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: P1588654

Luminaire Tested: 24CZSP-A-49HE-L835-S

Issue Date: 9/3/2026

Test Information

Test Method: LM-79-2019
Report Number: P1588654
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-L835-S
Description: 2x4 CZSP LED Luminaire, 3500K CCT and 4500 lumens, 80CRI, Smooth Lens, Air Vented Housing
Light Source: -
Ballast/Driver: -

Summary

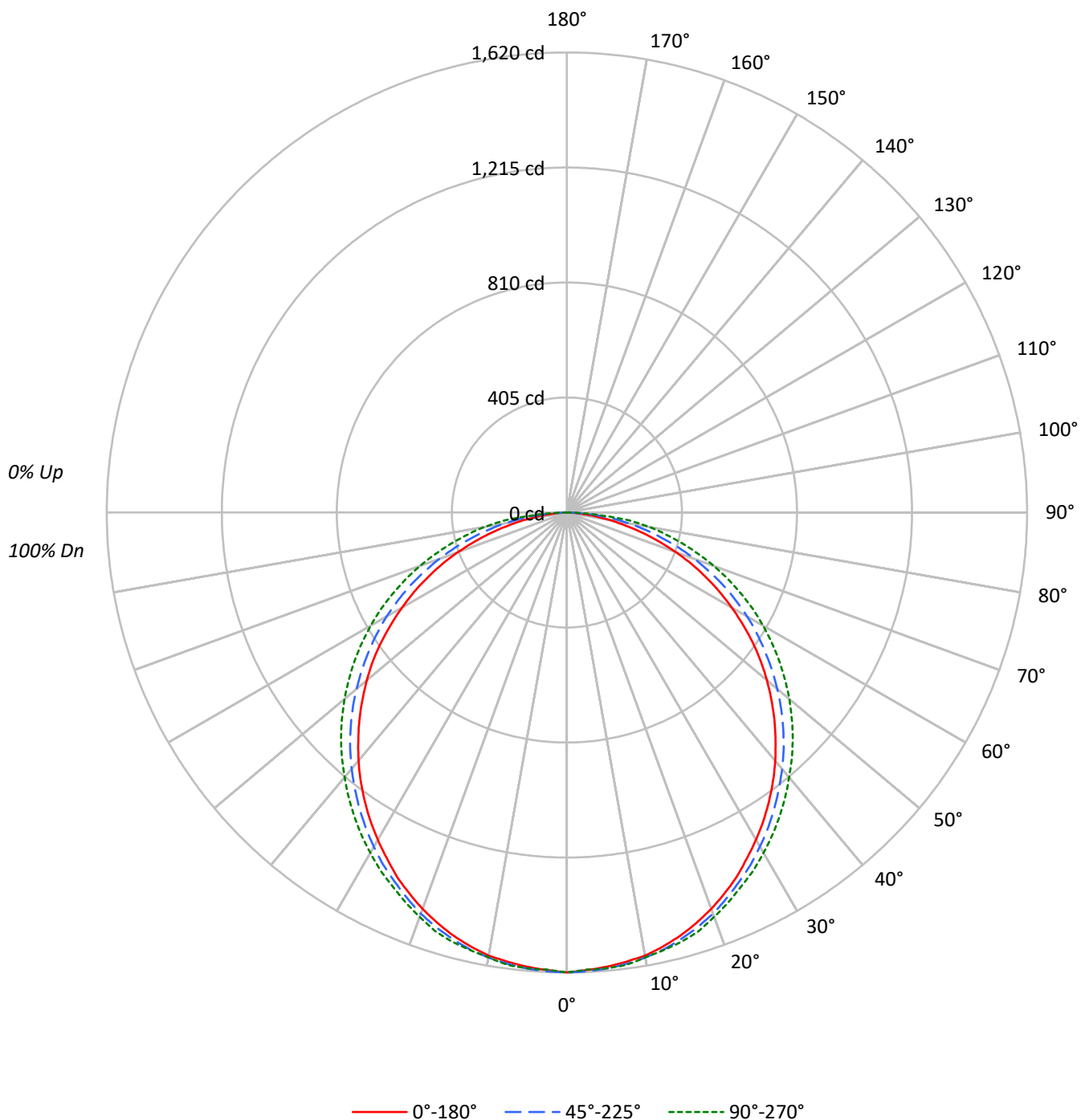
Lumens per Lamp: N/A
Luminaire Lumens: 4728.0 lumens
Efficiency: N/A
Efficacy: 142.0 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.27 / 1.37
Luminous Opening: Rectangular (W 1.83' x L: 3.83' x H: 0')
CIE Type: Direct

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°	2480	2480	2480
5°	2469	2479	2477
10°	2464	2475	2473
15°	2446	2466	2481
20°	2421	2450	2470
25°	2391	2425	2455
30°	2354	2404	2448
35°	2320	2380	2440
40°	2282	2356	2433
45°	2238	2333	2436
50°	2190	2304	2435
55°	2133	2272	2438
60°	2053	2247	2444
65°	1959	2203	2451
70°	1826	2142	2463
75°	1627	2056	2487
80°	1345	1958	2608
85°	875	1768	2279

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°

Vertical Angle: 82.5°

Luminance: 2691 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	153.2	3.2
10°-20°	438.6	9.3
20°-30°	661.4	14.0
30°-40°	796.7	16.8
40°-50°	832.0	17.6
50°-60°	764.1	16.2
60°-70°	601.8	12.7
70°-80°	369.2	7.8
80°-90°	111.1	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°	1253.1	26.5
0°-40°	2049.8	43.4
0°-60°	3645.9	77.1
0°-90°	4728.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4728.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1620	1620	1620	1620	1620	
5°	1606	1608	1612	1617	1611	153
15°	1543	1546	1555	1564	1564	435
25°	1415	1418	1435	1452	1452	651
35°	1241	1247	1273	1299	1305	776
45°	1033	1045	1077	1114	1125	797
55°	799	813	851	898	913	713
65°	540	559	608	659	676	535
75°	275	297	348	402	420	291
85°	50	68	101	128	130	65
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1619.5	1619.5	1619.5	1619.5	1619.5
2.5°	1613.2	1616.4	1617.4	1618.4	1611.2
5°	1606.0	1608.1	1612.2	1617.4	1611.2
7.5°	1595.6	1597.7	1602.9	1610.1	1607.0
10°	1584.2	1585.2	1591.5	1596.6	1590.4
12.5°	1565.5	1568.6	1575.9	1580.0	1578.0
15°	1542.7	1545.8	1555.1	1564.5	1564.5
17.5°	1515.7	1519.9	1531.3	1543.7	1544.8
20°	1485.6	1488.7	1503.3	1515.7	1515.7
22.5°	1451.4	1455.5	1470.1	1483.6	1485.6
25°	1415.1	1418.2	1434.8	1452.4	1452.4
27.5°	1372.6	1378.8	1399.5	1417.2	1421.3
30°	1331.1	1336.2	1359.1	1380.9	1384.0
32.5°	1287.5	1293.7	1317.6	1341.4	1346.6
35°	1240.8	1247.0	1273.0	1298.9	1305.1
37.5°	1192.0	1199.3	1226.3	1256.4	1262.6
40°	1141.2	1149.5	1178.5	1210.7	1216.9
42.5°	1087.3	1098.7	1129.8	1163.0	1172.3
45°	1033.3	1044.7	1076.9	1114.2	1124.6
47.5°	976.2	989.7	1022.9	1062.4	1073.8
50°	919.2	932.7	966.9	1009.4	1021.9
52.5°	861.1	874.6	909.8	954.5	967.9
55°	798.8	813.4	850.7	898.4	913.0
57.5°	734.5	753.2	792.6	841.4	855.9
60°	670.2	688.9	733.5	781.2	797.8
62.5°	606.9	624.5	670.2	721.0	738.7
65°	540.5	559.2	607.9	658.8	676.4
67.5°	475.2	493.8	542.6	595.5	614.2
70°	407.7	428.5	478.3	531.2	549.9
72.5°	340.3	362.1	412.9	466.9	484.5
75°	274.9	296.7	347.5	402.5	420.2
77.5°	210.6	234.5	284.3	340.3	356.9
80°	152.5	175.3	222.0	277.0	295.7
82.5°	97.5	117.2	163.9	215.8	229.3
85°	49.8	68.5	100.6	127.6	129.7
87.5°	15.6	21.8	33.2	49.8	50.8
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	14.63	16.30	15.00	16.61	16.92	15.46	17.13	15.83	17.44	17.76
	3H	16.39	17.90	16.77	18.22	18.58	17.58	19.09	17.96	19.41	19.77
	4H	17.01	18.43	17.41	18.78	19.15	18.47	19.89	18.87	20.24	20.61
	6H	17.42	18.74	17.83	19.10	19.49	19.25	20.57	19.66	20.94	21.33
	8H	17.53	18.79	17.95	19.18	19.58	19.57	20.83	19.99	21.22	21.62
	12H	17.58	18.79	18.01	19.17	19.60	19.78	20.99	20.21	21.37	21.80
4H	2H	15.41	16.83	15.80	17.18	17.55	16.05	17.47	16.45	17.82	18.20
	3H	17.38	18.58	17.79	18.98	19.38	18.41	19.61	18.82	20.00	20.40
	4H	18.12	19.21	18.55	19.62	20.05	19.46	20.55	19.89	20.96	21.39
	6H	18.65	19.60	19.10	20.04	20.49	20.41	21.36	20.86	21.80	22.26
	8H	18.79	19.69	19.25	20.13	20.59	20.81	21.70	21.27	22.14	22.61
	12H	18.88	19.68	19.36	20.16	20.62	21.09	21.89	21.57	22.36	22.83
8H	4H	18.58	19.47	19.04	19.91	20.38	19.75	20.64	20.21	21.08	21.55
	6H	19.24	19.98	19.73	20.47	20.94	20.86	21.60	21.35	22.09	22.57
	8H	19.45	20.12	19.96	20.62	21.11	21.37	22.04	21.88	22.55	23.03
	12H	19.59	20.18	20.10	20.67	21.23	21.76	22.35	22.26	22.84	23.40
12H	4H	18.67	19.47	19.15	19.95	20.41	19.77	20.58	20.25	21.05	21.52
	6H	19.37	20.04	19.88	20.55	21.03	20.91	21.58	21.41	22.08	22.57
	8H	19.65	20.24	20.16	20.73	21.29	21.49	22.08	21.99	22.57	23.13