

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: P1588319

Luminaire Tested: 24CZSP-49HE-L845

Issue Date: 9/3/2026

Test Information

Test Method: LM-79-2019
Report Number: P1588319
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2603-711-1)
Test Lab: INNOVATION CENTER
Issue Date: 9/3/2026
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: METALUX
Catalog Number: 24CZSP-49HE-L845
Description: 2x4 CZSP LED Luminaire, 4500K CCT and 4500 lumens, 80CRI, Ribbed Lens
Light Source: -
Ballast/Driver: -

Summary

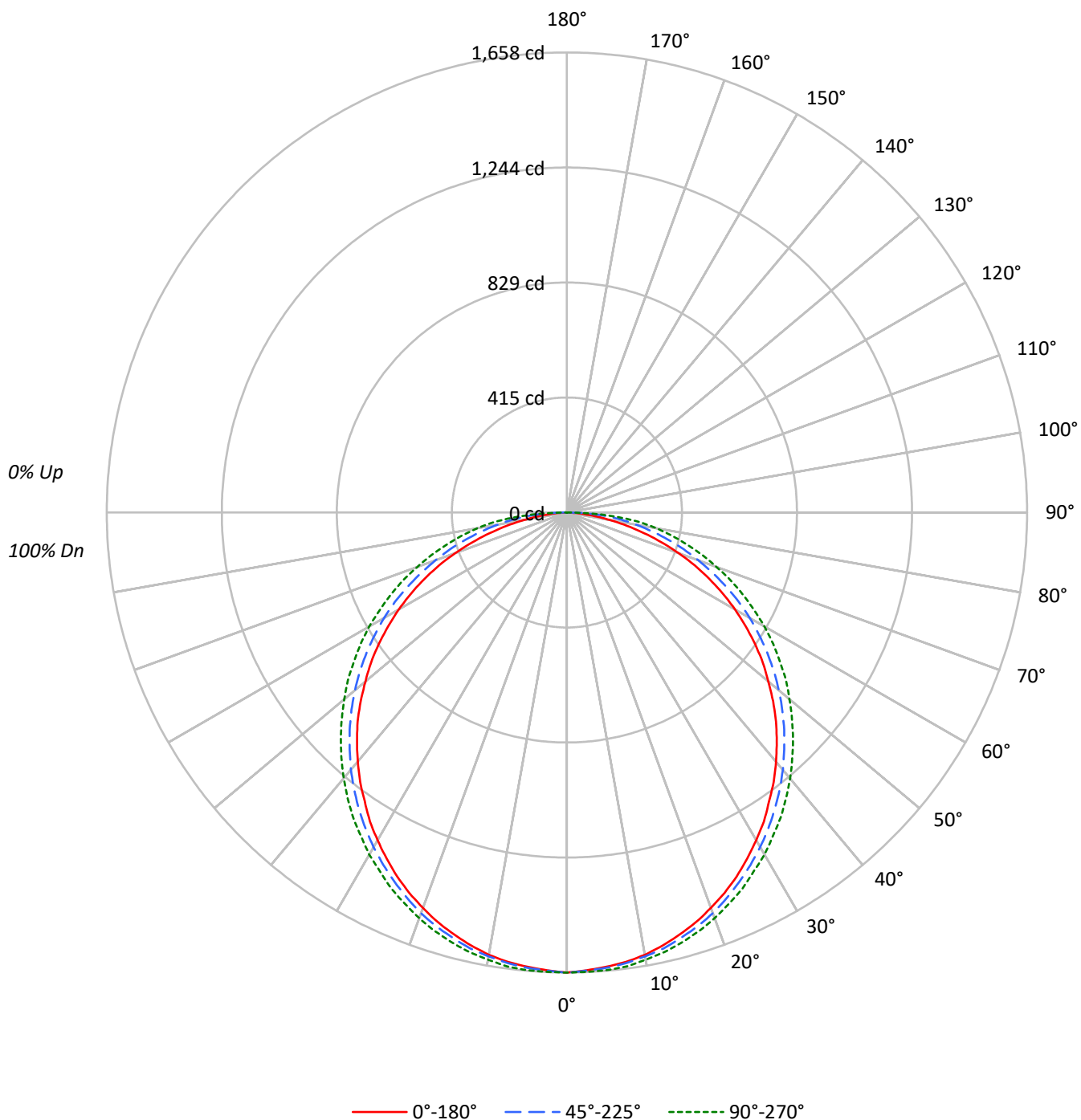
Lumens per Lamp: N/A
Luminaire Lumens: 4919.0 lumens
Efficiency: N/A
Efficacy: 147.7 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.27 / 1.38
Luminous Opening: Rectangular (W 1.83' x L: 3.83' x H: 0')
CIE Type: Direct

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
RW	70	50	30	10	70	50	30	10	50	30	10		50	30	10		50
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111		106	106	106		102
1	108	103	98	94	105	101	97	93	96	93	90		92	90	87		89
2	98	89	82	76	95	87	81	75	84	78	73		81	76	72		77
3	89	78	70	63	87	77	69	62	74	67	61		71	65	60		68
4	81	69	60	53	79	68	59	53	65	58	52		63	56	51		61
5	75	62	52	46	73	60	52	45	58	51	45		56	50	44		54
6	69	55	46	40	67	54	46	39	53	45	39		51	44	39		49
7	64	50	41	35	62	49	41	35	48	40	35		46	39	34		45
8	60	46	37	31	58	45	37	31	44	36	31		42	36	31		41
9	56	42	34	28	54	41	33	28	40	33	28		39	32	28		38
10	52	39	31	25	51	38	30	25	37	30	25		36	30	25		35

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2540	2540	2540
5°	2526	2533	2545
10°	2517	2526	2545
15°	2496	2517	2543
20°	2472	2505	2536
25°	2446	2483	2529
30°	2413	2463	2518
35°	2375	2441	2510
40°	2344	2420	2501
45°	2309	2397	2495
50°	2258	2375	2495
55°	2210	2352	2501
60°	2144	2331	2519
65°	2053	2294	2536
70°	1920	2256	2567
75°	1708	2224	2651
80°	1405	2233	2882
85°	958	2488	3183

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°

Vertical Angle: 85°

Luminance: 3183 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	156.9	3.2
10°-20°	449.3	9.1
20°-30°	679.5	13.8
30°-40°	819.9	16.7
40°-50°	857.3	17.4
50°-60°	791.0	16.1
60°-70°	629.0	12.8
70°-80°	397.0	8.1
80°-90°	139.2	2.8
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°	1285.7	26.1
0°-40°	2105.6	42.8
0°-60°	3753.9	76.3
0°-90°	4919.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4919.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1658	1658	1658	1658	1658	
5°	1643	1656	1647	1651	1656	156
15°	1574	1592	1587	1600	1604	444
25°	1447	1469	1469	1488	1496	667
35°	1270	1297	1306	1332	1342	796
45°	1066	1089	1107	1140	1152	821
55°	828	852	881	923	937	739
65°	566	592	633	686	700	560
75°	289	321	376	432	448	306
85°	54	90	142	176	181	69
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1658.2	1658.2	1658.2	1658.2	1658.2
2.5°	1651.4	1662.3	1652.8	1658.2	1656.8
5°	1643.2	1655.5	1647.3	1651.4	1655.5
7.5°	1633.7	1647.3	1637.8	1644.6	1650.0
10°	1618.7	1632.3	1624.2	1632.3	1636.4
12.5°	1598.3	1614.6	1609.2	1618.7	1622.8
15°	1573.8	1591.5	1587.4	1599.7	1603.8
17.5°	1547.9	1567.0	1564.3	1577.9	1582.0
20°	1516.6	1538.4	1537.0	1550.7	1556.1
22.5°	1483.9	1505.7	1504.4	1519.3	1526.2
25°	1447.2	1469.0	1469.0	1488.0	1496.2
27.5°	1406.3	1430.9	1432.2	1451.3	1458.1
30°	1364.1	1388.6	1392.7	1413.2	1424.0
32.5°	1320.6	1343.7	1350.5	1373.7	1381.8
35°	1270.2	1297.4	1305.6	1331.5	1342.4
37.5°	1223.9	1248.4	1259.3	1286.5	1297.4
40°	1172.2	1198.1	1210.3	1240.3	1251.1
42.5°	1119.1	1145.0	1158.6	1191.2	1202.1
45°	1066.0	1089.1	1106.8	1139.5	1151.8
47.5°	1007.5	1033.3	1052.4	1087.8	1100.0
50°	947.5	974.8	996.6	1034.7	1046.9
52.5°	890.4	914.9	939.4	981.6	995.2
55°	827.7	852.2	880.8	923.0	936.7
57.5°	763.8	788.3	820.9	865.9	880.8
60°	699.8	724.3	761.0	807.3	822.3
62.5°	633.1	657.6	698.4	746.1	759.7
65°	566.4	592.2	633.1	686.2	699.8
67.5°	498.3	524.1	567.7	623.5	638.5
70°	428.8	457.4	503.7	559.5	573.2
72.5°	356.7	389.4	441.1	495.6	511.9
75°	288.6	321.3	375.8	431.6	447.9
77.5°	221.9	258.7	313.1	371.7	389.4
80°	159.3	196.0	253.2	310.4	326.7
82.5°	102.1	140.2	197.4	251.9	265.5
85°	54.5	89.9	141.6	175.6	181.1
87.5°	17.7	46.3	64.0	84.4	85.8
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	14.80	16.47	15.16	16.78	17.10	15.52	17.19	15.88	17.50	17.82
	3H	16.58	18.10	16.96	18.43	18.78	17.68	19.20	18.06	19.53	19.89
	4H	17.21	18.65	17.61	18.99	19.37	18.62	20.05	19.01	20.40	20.77
	6H	17.64	18.97	18.05	19.33	19.72	19.48	20.81	19.89	21.17	21.56
	8H	17.75	19.02	18.17	19.41	19.81	19.85	21.13	20.28	21.51	21.91
	12H	17.81	19.03	18.24	19.41	19.84	20.16	21.39	20.59	21.77	22.19
4H	2H	15.56	16.99	15.96	17.34	17.71	16.12	17.55	16.52	17.90	18.27
	3H	17.58	18.79	17.99	19.19	19.59	18.53	19.74	18.94	20.14	20.54
	4H	18.34	19.44	18.78	19.85	20.29	19.64	20.73	20.07	21.15	21.58
	6H	18.90	19.86	19.35	20.30	20.76	20.68	21.64	21.13	22.08	22.53
	8H	19.06	19.96	19.52	20.40	20.87	21.14	22.04	21.60	22.49	22.95
	12H	19.16	19.97	19.63	20.44	20.91	21.54	22.35	22.02	22.83	23.29
8H	4H	18.83	19.74	19.29	20.18	20.64	19.95	20.86	20.41	21.30	21.76
	6H	19.54	20.30	20.03	20.78	21.26	21.17	21.93	21.66	22.41	22.89
	8H	19.78	20.46	20.29	20.97	21.45	21.77	22.45	22.27	22.95	23.44
	12H	19.95	20.56	20.46	21.05	21.60	22.31	22.91	22.81	23.40	23.96
12H	4H	18.94	19.75	19.41	20.23	20.69	19.98	20.80	20.46	21.27	21.74
	6H	19.70	20.38	20.21	20.89	21.37	21.23	21.92	21.74	22.42	22.90
	8H	20.03	20.63	20.53	21.12	21.68	21.91	22.51	22.41	23.00	23.56