

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: P1588316

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

Issue Date: 9/3/2026

Test Information

Test Method: LM-79-2019
Report Number: P1588316
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-49HE-L840-S
Description: 2x4 CZSP LED Luminaire, 4000K CCT and 4500 lumens, 80CRI, Smooth Lens
Light Source: -
Ballast/Driver: -

Summary

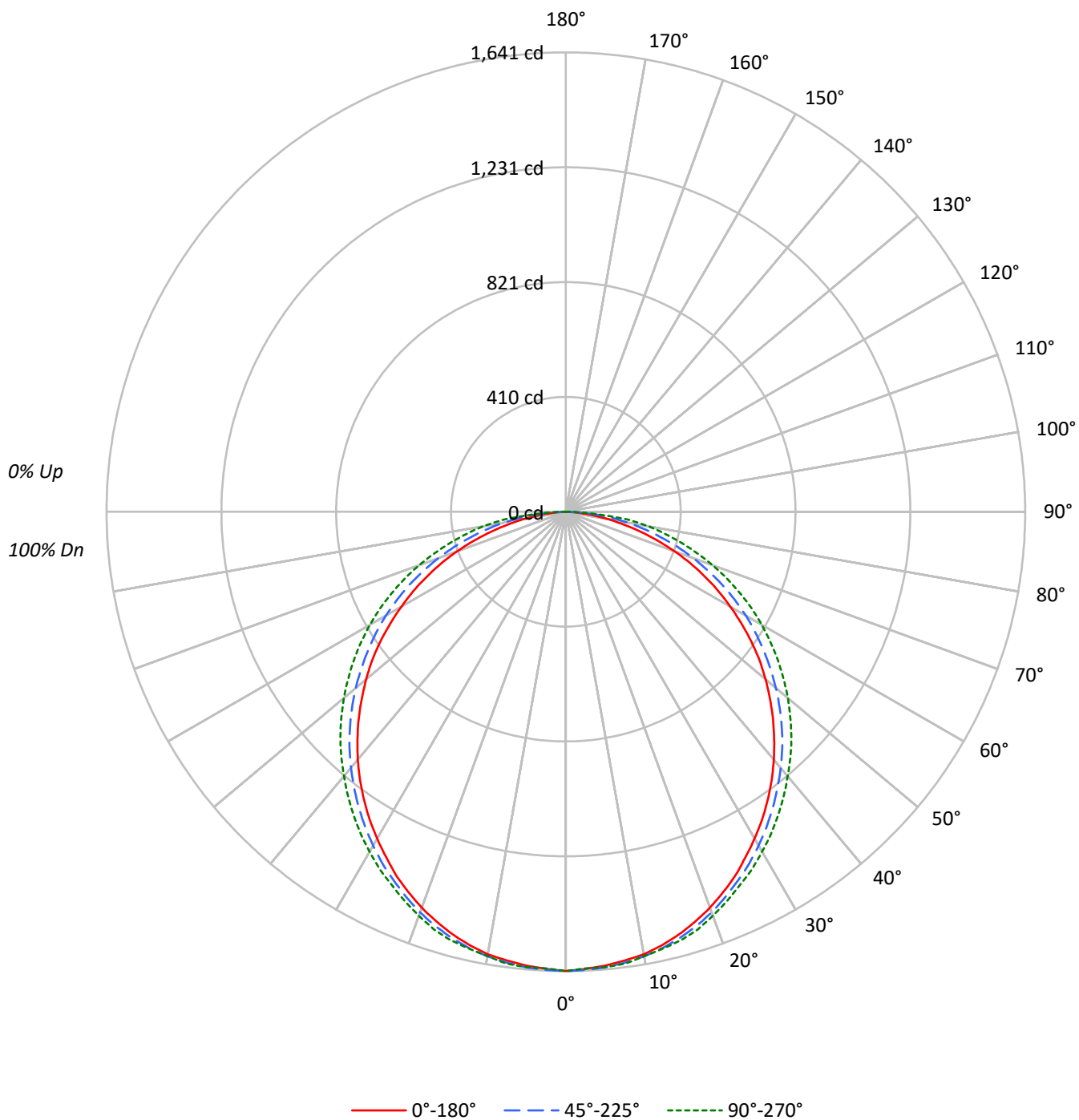
Lumens per Lamp: N/A
Luminaire Lumens: 4790.0 lumens
Efficiency: N/A
Efficacy: 143.8 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.27 / 1.37
Luminous Opening: Rectangular (W 1.83' x L: 3.83' x H: 0')
CIE Type: Direct

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

TEST NUMBER: P1588316

CATALOG NUMBER: 24CZSP-49HE-L840-S

Luminous Intensity Polar Plot



TEST NUMBER: P1588316

CATALOG NUMBER: 24CZSP-49HE-L840-S

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	99	95	106	101	97	93	97	93	90		93	90	88		89
2	98	90	83	77	96	88	81	76	84	79	74		81	76	72		78
3	89	79	70	64	87	77	69	63	74	67	62		71	65	61		69
4	82	69	60	54	79	68	60	53	66	58	52		63	57	52		61
5	75	62	53	46	73	61	52	46	59	51	45		57	50	45		55
6	69	56	47	40	67	55	46	40	53	45	40		51	44	39		50
7	64	50	42	35	62	50	41	35	48	40	35		47	40	35		45
8	60	46	37	32	58	45	37	31	44	37	31		43	36	31		42
9	56	42	34	28	54	42	34	28	40	33	28		39	33	28		38
10	52	39	31	26	51	38	31	26	37	30	25		37	30	25		36

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2513	2513	2513
5°	2501	2511	2510
10°	2496	2508	2506
15°	2478	2498	2513
20°	2453	2482	2503
25°	2423	2457	2487
30°	2385	2435	2480
35°	2350	2411	2472
40°	2312	2387	2465
45°	2268	2363	2468
50°	2219	2334	2467
55°	2161	2302	2470
60°	2080	2276	2476
65°	1985	2232	2484
70°	1850	2170	2495
75°	1648	2084	2519
80°	1363	1984	2643
85°	887	1792	2309

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°

Vertical Angle: 82.5°

Luminance: 2726 cd/sqm

TEST NUMBER: P1588316

CATALOG NUMBER: 24CZSP-49HE-L840-S

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	155.2	3.2
10°-20°	444.3	9.3
20°-30°	670.1	14.0
30°-40°	807.1	16.8
40°-50°	842.9	17.6
50°-60°	774.1	16.2
60°-70°	609.7	12.7
70°-80°	374.0	7.8
80°-90°	112.6	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°	1269.6	26.5
0°-40°	2076.7	43.4
0°-60°	3693.7	77.1
0°-90°	4790.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4790.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1641	1641	1641	1641	1641	
5°	1627	1629	1633	1639	1632	155
15°	1563	1566	1576	1585	1585	441
25°	1434	1437	1454	1472	1472	660
35°	1257	1263	1290	1316	1322	786
45°	1047	1058	1091	1129	1139	807
55°	809	824	862	910	925	722
65°	548	566	616	667	685	542
75°	278	301	352	408	426	295
85°	50	69	102	129	131	66
90°	0	0	0	0	0	

TEST NUMBER: P1588316

CATALOG NUMBER: 24CZSP-49HE-L840-S

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1640.7	1640.7	1640.7	1640.7	1640.7
2.5°	1634.4	1637.5	1638.6	1639.7	1632.3
5°	1627.0	1629.1	1633.3	1638.6	1632.3
7.5°	1616.5	1618.6	1623.9	1631.2	1628.1
10°	1605.0	1606.0	1612.3	1617.6	1611.3
12.5°	1586.0	1589.2	1596.6	1600.8	1598.7
15°	1562.9	1566.1	1575.5	1585.0	1585.0
17.5°	1535.6	1539.8	1551.4	1564.0	1565.0
20°	1505.1	1508.3	1523.0	1535.6	1535.6
22.5°	1470.4	1474.6	1489.4	1503.0	1505.1
25°	1433.6	1436.8	1453.6	1471.5	1471.5
27.5°	1390.6	1396.9	1417.9	1435.7	1440.0
30°	1348.5	1353.8	1376.9	1399.0	1402.1
32.5°	1304.4	1310.7	1334.8	1359.0	1364.3
35°	1257.1	1263.4	1289.6	1315.9	1322.2
37.5°	1207.7	1215.0	1242.4	1272.8	1279.1
40°	1156.2	1164.6	1194.0	1226.6	1232.9
42.5°	1101.5	1113.1	1144.6	1178.2	1187.7
45°	1046.9	1058.4	1091.0	1128.8	1139.3
47.5°	989.0	1002.7	1036.3	1076.3	1087.8
50°	931.2	944.9	979.6	1022.7	1035.3
52.5°	872.4	886.0	921.8	967.0	980.6
55°	809.3	824.0	861.9	910.2	924.9
57.5°	744.1	763.1	803.0	852.4	867.1
60°	679.0	697.9	743.1	791.4	808.3
62.5°	614.9	632.7	679.0	730.5	748.4
65°	547.6	566.5	615.9	667.4	685.3
67.5°	481.4	500.3	549.7	603.3	622.2
70°	413.1	434.1	484.5	538.1	557.1
72.5°	344.7	366.8	418.3	473.0	490.8
75°	278.5	300.6	352.1	407.8	425.7
77.5°	213.4	237.5	288.0	344.7	361.6
80°	154.5	177.6	224.9	280.6	299.6
82.5°	98.8	118.8	166.1	218.6	232.3
85°	50.5	69.4	102.0	129.3	131.4
87.5°	15.8	22.1	33.6	50.5	51.5
90°	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P1588316

CATALOG NUMBER: 24CZSP-49HE-L840-S

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	14.68	16.34	15.04	16.66	16.97	15.51	17.17	15.87	17.49	17.80
	3H	16.44	17.94	16.81	18.27	18.63	17.63	19.13	18.00	19.46	19.82
	4H	17.05	18.48	17.45	18.82	19.20	18.51	19.94	18.91	20.28	20.66
	6H	17.46	18.79	17.88	19.15	19.54	19.30	20.62	19.71	20.98	21.37
	8H	17.57	18.83	18.00	19.22	19.62	19.62	20.88	20.04	21.27	21.67
	12H	17.62	18.83	18.05	19.22	19.64	19.83	21.04	20.26	21.42	21.85
4H	2H	15.45	16.87	15.85	17.22	17.60	16.10	17.52	16.50	17.87	18.24
	3H	17.43	18.63	17.84	19.02	19.42	18.45	19.65	18.86	20.05	20.45
	4H	18.17	19.25	18.60	19.66	20.10	19.50	20.59	19.94	21.00	21.44
	6H	18.69	19.65	19.15	20.09	20.54	20.46	21.41	20.91	21.85	22.30
	8H	18.84	19.73	19.30	20.17	20.64	20.85	21.75	21.31	22.19	22.65
	12H	18.92	19.73	19.40	20.20	20.67	21.13	21.93	21.61	22.41	22.88
8H	4H	18.62	19.52	19.08	19.96	20.42	19.79	20.69	20.25	21.13	21.59
	6H	19.29	20.03	19.78	20.52	20.99	20.91	21.65	21.40	22.14	22.61
	8H	19.50	20.16	20.00	20.67	21.15	21.42	22.09	21.92	22.59	23.08
	12H	19.64	20.23	20.14	20.72	21.28	21.80	22.39	22.31	22.88	23.44
12H	4H	18.71	19.52	19.19	19.99	20.46	19.82	20.62	20.30	21.10	21.56
	6H	19.42	20.09	19.92	20.59	21.08	20.95	21.62	21.46	22.13	22.61
	8H	19.70	20.29	20.20	20.78	21.34	21.53	22.12	22.04	22.61	23.17