

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: P1588325

Luminaire Tested: 24CZSP-49HE-L935

Issue Date: 9/3/2026

Test Information

Test Method: LM-79-2019
Report Number: P1588325
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-L935
Description: 2x4 CZSP LED Luminaire, 3500K CCT and 4500 lumens, 90CRI, Ribbed Lens
Light Source: -
Ballast/Driver: -

Summary

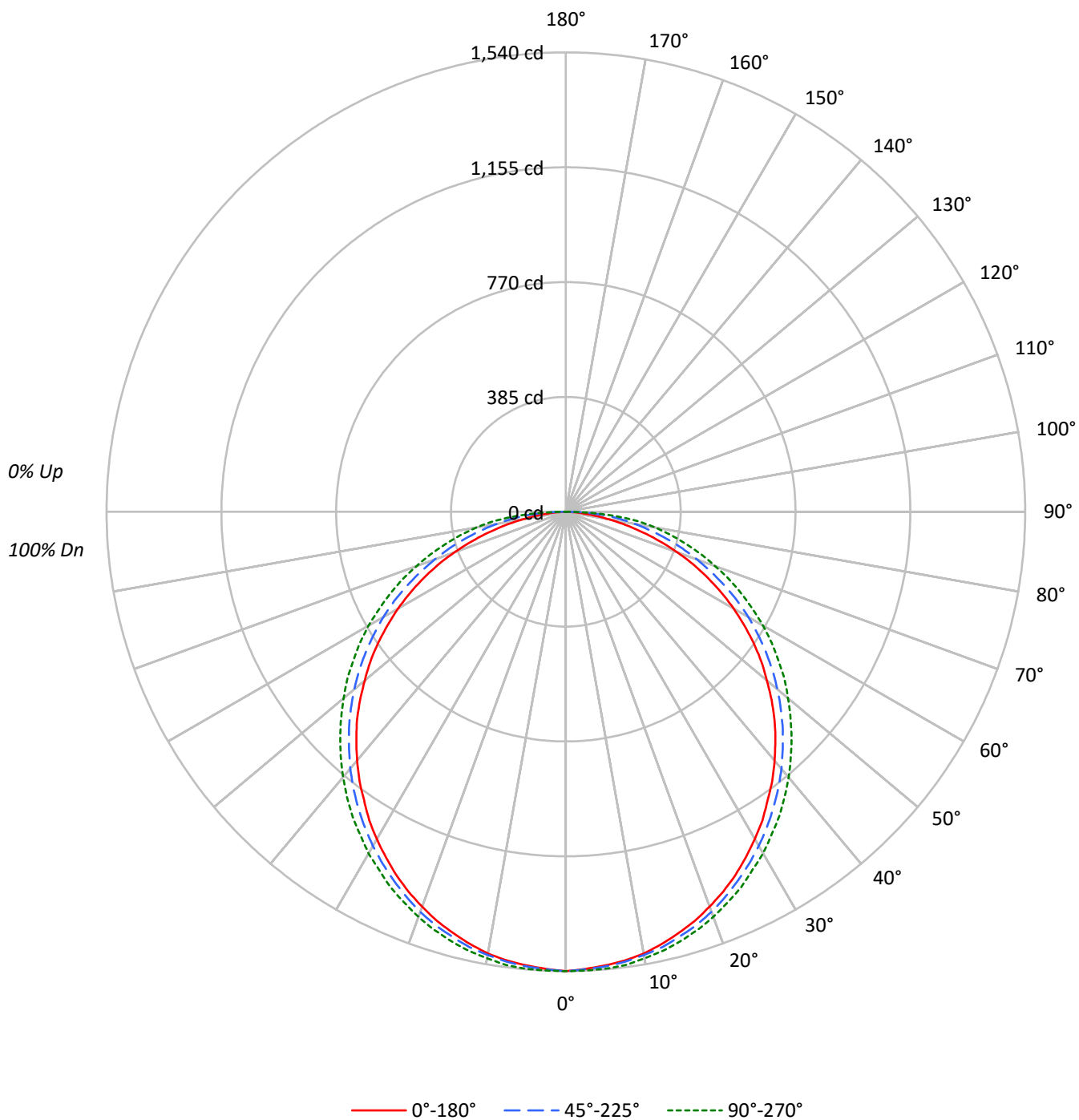
Lumens per Lamp: N/A
Luminaire Lumens: 4569.0 lumens
Efficiency: N/A
Efficacy: 137.2 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.27 / 1.38
Luminous Opening: Rectangular (W 1.83' x L: 3.83' x H: 0')
CIE Type: Direct

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

TEST NUMBER: P1588325

CATALOG NUMBER: 24CZSP-49HE-L935

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°	2359	2359	2359
5°	2347	2352	2364
10°	2338	2346	2364
15°	2318	2338	2362
20°	2296	2327	2356
25°	2272	2306	2349
30°	2241	2288	2339
35°	2206	2267	2331
40°	2177	2248	2323
45°	2145	2227	2317
50°	2097	2206	2317
55°	2053	2185	2323
60°	1991	2165	2340
65°	1907	2131	2356
70°	1784	2095	2384
75°	1587	2065	2462
80°	1305	2075	2677
85°	889	2311	2956

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°

Vertical Angle: 85°

Luminance: 2956 cd/sqm

TEST NUMBER: P1588325

CATALOG NUMBER: 24CZSP-49HE-L935

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	145.8	3.2
10°-20°	417.4	9.1
20°-30°	631.1	13.8
30°-40°	761.6	16.7
40°-50°	796.3	17.4
50°-60°	734.7	16.1
60°-70°	584.2	12.8
70°-80°	368.7	8.1
80°-90°	129.3	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°	1194.2	26.1
0°-40°	1955.8	42.8
0°-60°	3486.8	76.3
0°-90°	4569.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4569.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1540	1540	1540	1540	1540	
5°	1526	1538	1530	1534	1538	145
15°	1462	1478	1474	1486	1490	413
25°	1344	1364	1364	1382	1390	619
35°	1180	1205	1213	1237	1247	739
45°	990	1012	1028	1058	1070	763
55°	769	792	818	857	870	687
65°	526	550	588	637	650	520
75°	268	298	349	401	416	284
85°	51	84	132	163	168	64
90°	0	0	0	0	0	

TEST NUMBER: P1588325

CATALOG NUMBER: 24CZSP-49HE-L935

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1540.2	1540.2	1540.2	1540.2	1540.2
2.5°	1533.9	1544.0	1535.2	1540.2	1539.0
5°	1526.3	1537.7	1530.1	1533.9	1537.7
7.5°	1517.5	1530.1	1521.3	1527.6	1532.6
10°	1503.6	1516.2	1508.6	1516.2	1520.0
12.5°	1484.6	1499.8	1494.7	1503.6	1507.3
15°	1461.8	1478.3	1474.5	1485.8	1489.6
17.5°	1437.8	1455.5	1453.0	1465.6	1469.4
20°	1408.7	1428.9	1427.7	1440.3	1445.4
22.5°	1378.4	1398.6	1397.3	1411.2	1417.6
25°	1344.2	1364.5	1364.5	1382.2	1389.7
27.5°	1306.3	1329.0	1330.3	1348.0	1354.3
30°	1267.1	1289.8	1293.6	1312.6	1322.7
32.5°	1226.6	1248.1	1254.4	1275.9	1283.5
35°	1179.8	1205.1	1212.7	1236.7	1246.8
37.5°	1136.8	1159.6	1169.7	1195.0	1205.1
40°	1088.8	1112.8	1124.2	1152.0	1162.1
42.5°	1039.5	1063.5	1076.1	1106.5	1116.6
45°	990.1	1011.6	1028.1	1058.4	1069.8
47.5°	935.8	959.8	977.5	1010.4	1021.8
50°	880.1	905.4	925.7	961.1	972.4
52.5°	827.0	849.8	872.5	911.7	924.4
55°	768.8	791.6	818.2	857.4	870.0
57.5°	709.4	732.2	762.5	804.3	818.2
60°	650.0	672.7	706.9	749.9	763.8
62.5°	588.0	610.8	648.7	693.0	705.6
65°	526.1	550.1	588.0	637.3	650.0
67.5°	462.8	486.9	527.3	579.2	593.1
70°	398.3	424.9	467.9	519.7	532.4
72.5°	331.3	361.7	409.7	460.3	475.5
75°	268.1	298.4	349.0	400.9	416.0
77.5°	206.1	240.3	290.8	345.2	361.7
80°	148.0	182.1	235.2	288.3	303.5
82.5°	94.8	130.2	183.4	233.9	246.6
85°	50.6	83.5	131.5	163.1	168.2
87.5°	16.4	43.0	59.4	78.4	79.7
90°	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P1588325

CATALOG NUMBER: 24CZSP-49HE-L935

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	14.54	16.21	14.90	16.52	16.84	15.26	16.93	15.63	17.25	17.56
	3H	16.33	17.84	16.70	18.17	18.53	17.43	18.94	17.80	19.27	19.63
	4H	16.96	18.39	17.35	18.74	19.11	18.36	19.79	18.76	20.14	20.51
	6H	17.38	18.71	17.79	19.07	19.46	19.22	20.55	19.63	20.91	21.30
	8H	17.49	18.76	17.92	19.15	19.55	19.60	20.87	20.02	21.26	21.66
	12H	17.55	18.77	17.98	19.15	19.58	19.91	21.13	20.34	21.51	21.94
4H	2H	15.30	16.74	15.70	17.08	17.46	15.86	17.30	16.26	17.64	18.02
	3H	17.33	18.54	17.73	18.93	19.33	18.28	19.49	18.68	19.88	20.28
	4H	18.09	19.19	18.52	19.60	20.03	19.38	20.48	19.81	20.89	21.32
	6H	18.64	19.61	19.09	20.05	20.50	20.42	21.38	20.87	21.82	22.28
	8H	18.80	19.70	19.26	20.15	20.61	20.88	21.79	21.34	22.23	22.69
	12H	18.90	19.71	19.38	20.19	20.66	21.28	22.10	21.76	22.57	23.04
8H	4H	18.58	19.48	19.03	19.92	20.38	19.70	20.60	20.15	21.04	21.50
	6H	19.28	20.04	19.78	20.53	21.00	20.91	21.67	21.41	22.16	22.63
	8H	19.53	20.21	20.03	20.71	21.19	21.51	22.19	22.02	22.70	23.18
	12H	19.70	20.30	20.20	20.79	21.35	22.05	22.66	22.56	23.15	23.70
12H	4H	18.68	19.50	19.16	19.97	20.44	19.73	20.54	20.21	21.02	21.48
	6H	19.45	20.13	19.95	20.63	21.11	20.98	21.66	21.48	22.16	22.65
	8H	19.77	20.37	20.27	20.86	21.42	21.65	22.26	22.16	22.75	23.30