

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: P1588368

Luminaire Tested: 24CZSP-52HE-L945-S

Issue Date: 9/3/2026

Test Information

Test Method: LM-79-2019
Report Number: P1588368
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-52HE-L945-S
Description: 2x4 CZSP LED Luminaire, 4500K CCT and 5000 lumens, 90CRI, Smooth Lens
Light Source: -
Ballast/Driver: -

Summary

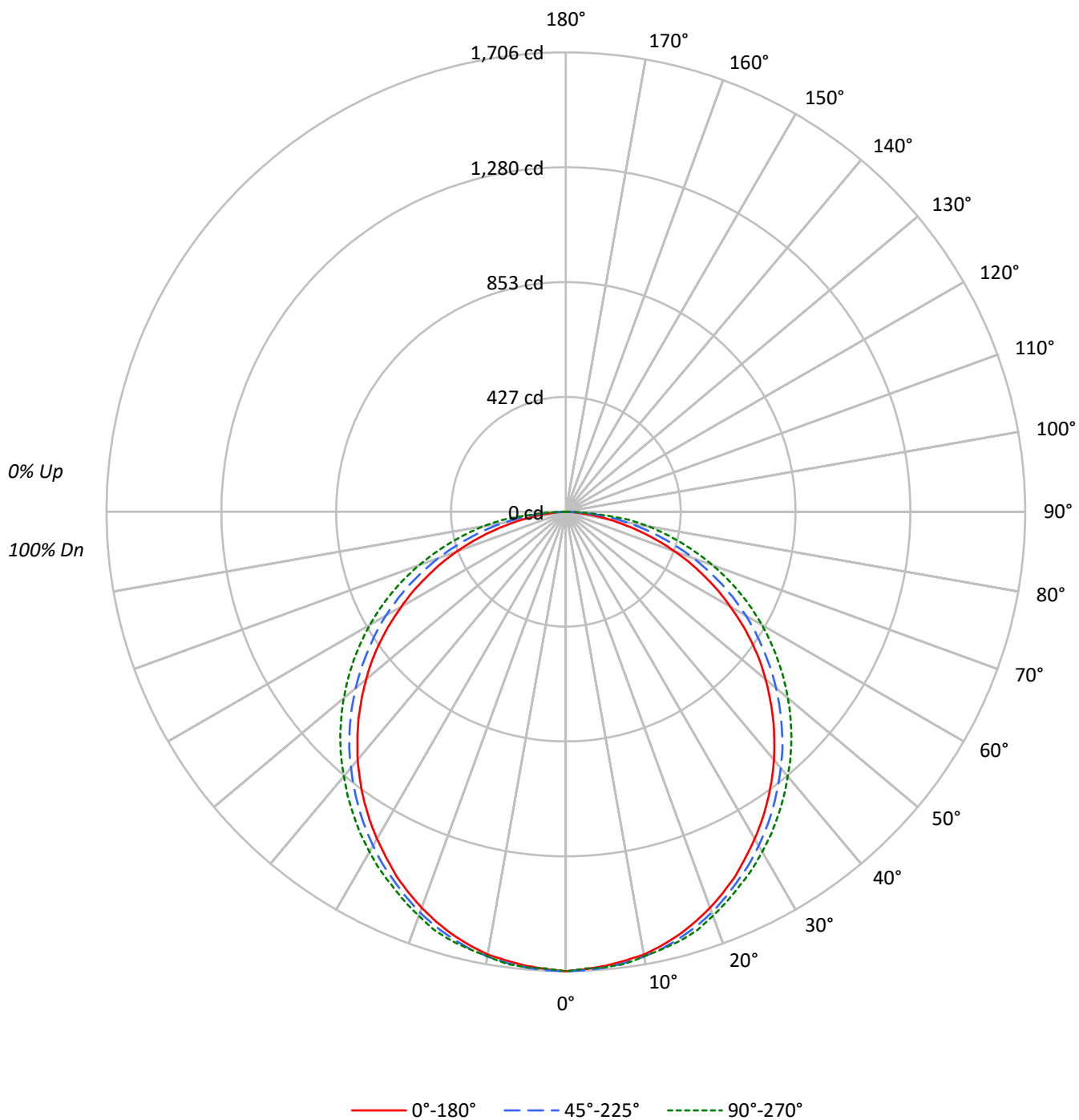
Lumens per Lamp: N/A
Luminaire Lumens: 4982.0 lumens
Efficiency: N/A
Efficacy: 135.8 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.27 / 1.37
Luminous Opening: Rectangular (W 1.83' x L: 3.83' x H: 0')
CIE Type: Direct

Input Watts (W): 36.7
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°	2614	2614	2614
5°	2602	2612	2610
10°	2596	2608	2606
15°	2578	2598	2614
20°	2551	2582	2603
25°	2520	2555	2586
30°	2481	2533	2579
35°	2445	2508	2571
40°	2404	2483	2564
45°	2358	2458	2567
50°	2308	2428	2566
55°	2248	2394	2569
60°	2163	2368	2575
65°	2064	2322	2583
70°	1924	2257	2595
75°	1714	2167	2620
80°	1417	2063	2748
85°	923	1863	2401

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°

Vertical Angle: 82.5°

Luminance: 2835 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	161.4	3.2
10°-20°	462.1	9.3
20°-30°	696.9	14.0
30°-40°	839.5	16.8
40°-50°	876.7	17.6
50°-60°	805.1	16.2
60°-70°	634.2	12.7
70°-80°	389.0	7.8
80°-90°	117.1	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°	1320.4	26.5
0°-40°	2159.9	43.4
0°-60°	3841.7	77.1
0°-90°	4982.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4982.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1706	1706	1706	1706	1706	
5°	1692	1694	1699	1704	1698	161
15°	1626	1629	1639	1648	1648	458
25°	1491	1494	1512	1530	1530	686
35°	1308	1314	1341	1369	1375	818
45°	1089	1101	1135	1174	1185	839
55°	842	857	896	947	962	751
65°	570	589	641	694	713	563
75°	290	313	366	424	443	307
85°	52	72	106	134	137	69
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1706.5	1706.5	1706.5	1706.5	1706.5
2.5°	1699.9	1703.2	1704.3	1705.4	1697.7
5°	1692.3	1694.4	1698.8	1704.3	1697.7
7.5°	1681.3	1683.5	1689.0	1696.6	1693.3
10°	1669.3	1670.4	1677.0	1682.4	1675.9
12.5°	1649.6	1652.9	1660.6	1664.9	1662.7
15°	1625.6	1628.9	1638.7	1648.5	1648.5
17.5°	1597.1	1601.5	1613.5	1626.7	1627.8
20°	1565.4	1568.7	1584.0	1597.1	1597.1
22.5°	1529.4	1533.7	1549.0	1563.3	1565.4
25°	1491.1	1494.4	1511.9	1530.5	1530.5
27.5°	1446.3	1452.8	1474.7	1493.3	1497.7
30°	1402.6	1408.0	1432.1	1455.0	1458.3
32.5°	1356.6	1363.2	1388.3	1413.5	1419.0
35°	1307.5	1314.0	1341.3	1368.7	1375.2
37.5°	1256.1	1263.7	1292.1	1323.9	1330.4
40°	1202.5	1211.3	1241.9	1275.8	1282.3
42.5°	1145.7	1157.7	1190.5	1225.5	1235.3
45°	1088.8	1100.8	1134.7	1174.1	1185.0
47.5°	1028.7	1042.9	1077.9	1119.4	1131.5
50°	968.6	982.8	1018.9	1063.7	1076.8
52.5°	907.3	921.6	958.7	1005.7	1019.9
55°	841.8	857.1	896.4	946.7	962.0
57.5°	774.0	793.7	835.2	886.6	901.9
60°	706.2	725.9	772.9	823.2	840.7
62.5°	639.5	658.1	706.2	759.8	778.4
65°	569.6	589.2	640.6	694.2	712.8
67.5°	500.7	520.4	571.7	627.5	647.2
70°	429.6	451.5	504.0	559.7	579.4
72.5°	358.6	381.5	435.1	491.9	510.5
75°	289.7	312.7	366.2	424.2	442.7
77.5°	221.9	247.1	299.5	358.6	376.1
80°	160.7	184.7	233.9	291.9	311.6
82.5°	102.8	123.5	172.7	227.4	241.6
85°	52.5	72.2	106.0	134.5	136.6
87.5°	16.4	23.0	35.0	52.5	53.6
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	14.82	16.48	15.18	16.79	17.11	15.65	17.31	16.01	17.62	17.94
	3H	16.57	18.08	16.95	18.41	18.76	17.76	19.27	18.14	19.60	19.96
	4H	17.19	18.61	17.59	18.96	19.33	18.65	20.07	19.05	20.42	20.80
	6H	17.60	18.92	18.01	19.29	19.68	19.43	20.75	19.84	21.12	21.51
	8H	17.71	18.97	18.13	19.36	19.76	19.75	21.02	20.18	21.40	21.80
	12H	17.76	18.97	18.19	19.35	19.78	19.96	21.17	20.39	21.56	21.98
4H	2H	15.59	17.01	15.99	17.36	17.73	16.23	17.66	16.63	18.00	18.38
	3H	17.57	18.76	17.97	19.16	19.56	18.59	19.79	19.00	20.18	20.58
	4H	18.30	19.39	18.73	19.80	20.24	19.64	20.73	20.07	21.14	21.57
	6H	18.83	19.78	19.28	20.22	20.68	20.59	21.55	21.05	21.99	22.44
	8H	18.98	19.87	19.44	20.31	20.77	20.99	21.88	21.45	22.32	22.79
	12H	19.06	19.86	19.54	20.34	20.81	21.27	22.07	21.75	22.55	23.01
8H	4H	18.76	19.65	19.22	20.09	20.56	19.93	20.82	20.39	21.26	21.73
	6H	19.42	20.17	19.91	20.65	21.13	21.04	21.79	21.53	22.27	22.75
	8H	19.63	20.30	20.14	20.81	21.29	21.55	22.22	22.06	22.73	23.21
	12H	19.77	20.36	20.28	20.85	21.41	21.94	22.53	22.44	23.02	23.58
12H	4H	18.85	19.65	19.33	20.13	20.60	19.95	20.76	20.43	21.23	21.70
	6H	19.55	20.22	20.06	20.73	21.21	21.09	21.76	21.60	22.26	22.75
	8H	19.83	20.42	20.34	20.91	21.47	21.67	22.26	22.17	22.75	23.31