

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: P1588249

Luminaire Tested: 24CZSP-37HE-L945

Issue Date: 9/3/2026

Test Information

Test Method: LM-79-2019
Report Number: P1588249
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-37HE-L945
Description: 2x4 CZSP LED Luminaire, 4500K CCT and 3500 lumens, 90CRI, Ribbed Lens
Light Source: -
Ballast/Driver: -

Summary

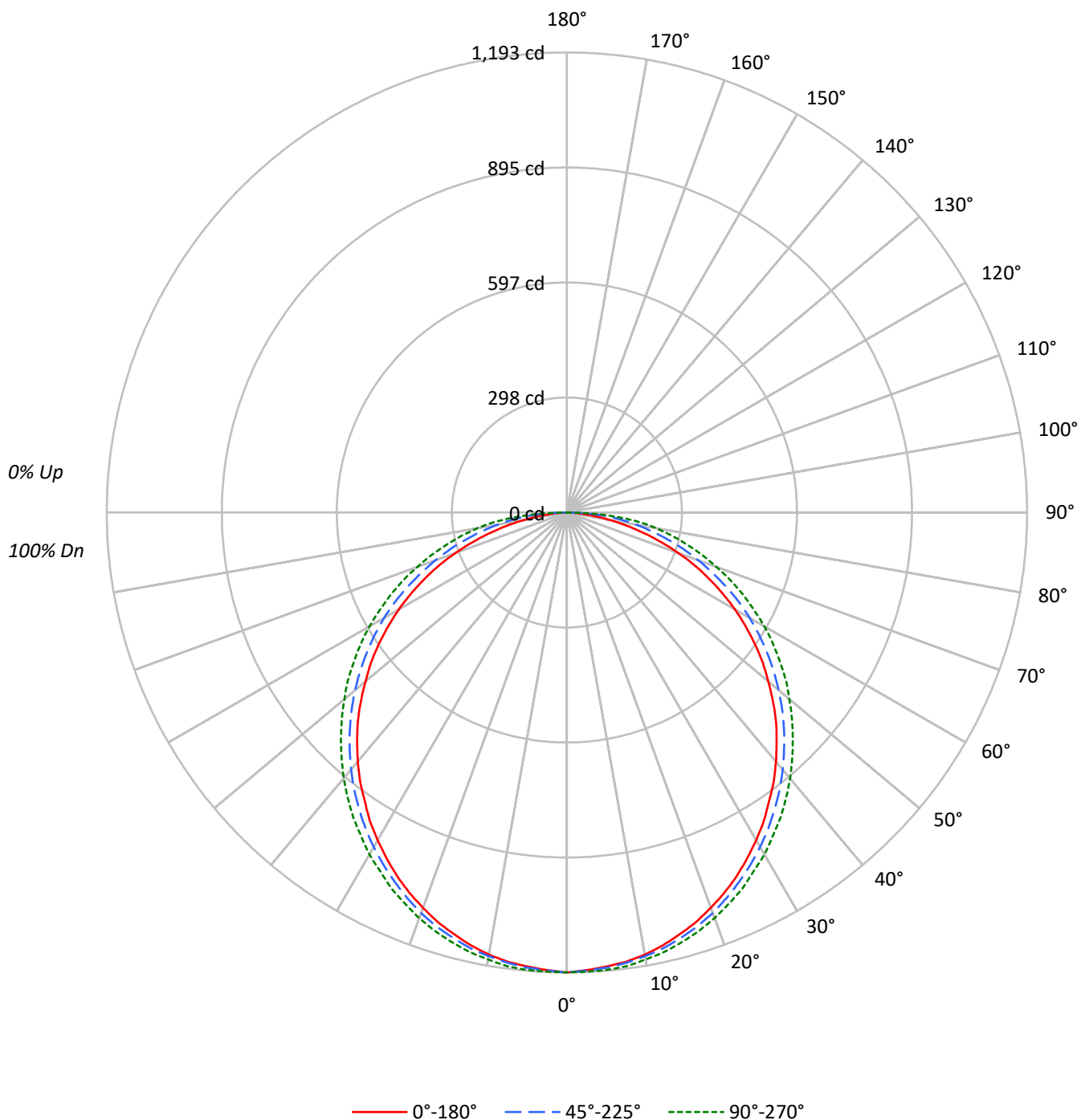
Lumens per Lamp: N/A
Luminaire Lumens: 3538.0 lumens
Efficiency: N/A
Efficacy: 143.2 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.27 / 1.38
Luminous Opening: Rectangular (W 1.83' x L: 3.83' x H: 0')
CIE Type: Direct

Input Watts (W): 24.7
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

TEST NUMBER: P1588249

CATALOG NUMBER: 24CZSP-37HE-L945

Luminous Intensity Polar Plot



TEST NUMBER: P1588249

CATALOG NUMBER: 24CZSP-37HE-L945

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	98	94	105	101	97	93	96	93	90		92	90	87		89	87	85	82
2	98	89	82	76	95	87	81	75	84	78	73		81	76	72		77	74	70	68
3	89	78	70	63	87	77	69	62	74	67	61		71	65	60		68	63	59	57
4	81	69	60	53	79	68	59	53	65	58	52		63	56	51		61	55	51	48
5	75	62	52	46	73	60	52	45	58	51	45		56	50	44		54	49	44	42
6	69	55	46	40	67	54	46	39	53	45	39		51	44	39		49	43	38	36
7	64	50	41	35	62	49	41	35	48	40	35		46	39	34		45	39	34	32
8	60	46	37	31	58	45	37	31	44	36	31		42	36	31		41	35	30	29
9	56	42	34	28	54	41	33	28	40	33	28		39	32	28		38	32	27	26
10	52	39	31	25	51	38	30	25	37	30	25		36	30	25		35	29	25	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1827	1827	1827
5°	1817	1822	1831
10°	1811	1817	1831
15°	1795	1811	1829
20°	1778	1802	1824
25°	1759	1786	1819
30°	1735	1772	1811
35°	1708	1756	1805
40°	1686	1740	1799
45°	1661	1724	1794
50°	1624	1708	1794
55°	1590	1692	1799
60°	1542	1677	1812
65°	1476	1650	1824
70°	1381	1622	1846
75°	1229	1600	1907
80°	1011	1606	2073
85°	689	1789	2288

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°

Vertical Angle: 85°

Luminance: 2288 cd/sqm

TEST NUMBER: P1588249

CATALOG NUMBER: 24CZSP-37HE-L945

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	112.9	3.2
10°-20°	323.2	9.1
20°-30°	488.7	13.8
30°-40°	589.7	16.7
40°-50°	616.6	17.4
50°-60°	568.9	16.1
60°-70°	452.4	12.8
70°-80°	285.5	8.1
80°-90°	100.1	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°	924.8	26.1
0°-40°	1514.5	42.8
0°-60°	2700.0	76.3
0°-90°	3538.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3538.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1193	1193	1193	1193	1193	
5°	1182	1191	1185	1188	1191	112
15°	1132	1145	1142	1151	1154	319
25°	1041	1057	1057	1070	1076	479
35°	914	933	939	958	966	572
45°	767	783	796	820	828	590
55°	595	613	634	664	674	532
65°	407	426	455	494	503	402
75°	208	231	270	310	322	220
85°	39	65	102	126	130	50
90°	0	0	0	0	0	

TEST NUMBER: P1588249

CATALOG NUMBER: 24CZSP-37HE-L945

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1192.7	1192.7	1192.7	1192.7	1192.7
2.5°	1187.8	1195.6	1188.8	1192.7	1191.7
5°	1181.9	1190.7	1184.8	1187.8	1190.7
7.5°	1175.0	1184.8	1178.0	1182.9	1186.8
10°	1164.3	1174.1	1168.2	1174.1	1177.0
12.5°	1149.6	1161.3	1157.4	1164.3	1167.2
15°	1132.0	1144.7	1141.8	1150.6	1153.5
17.5°	1113.4	1127.1	1125.1	1134.9	1137.8
20°	1090.8	1106.5	1105.5	1115.3	1119.2
22.5°	1067.3	1083.0	1082.0	1092.8	1097.7
25°	1040.9	1056.6	1056.6	1070.3	1076.1
27.5°	1011.5	1029.1	1030.1	1043.8	1048.7
30°	981.2	998.8	1001.7	1016.4	1024.2
32.5°	949.8	966.5	971.4	988.0	993.9
35°	913.6	933.2	939.1	957.7	965.5
37.5°	880.3	897.9	905.8	925.3	933.2
40°	843.1	861.7	870.5	892.1	899.9
42.5°	804.9	823.5	833.3	856.8	864.6
45°	766.7	783.4	796.1	819.6	828.4
47.5°	724.6	743.2	756.9	782.4	791.2
50°	681.5	701.1	716.8	744.2	753.0
52.5°	640.4	658.0	675.7	706.0	715.8
55°	595.4	613.0	633.5	663.9	673.7
57.5°	549.3	567.0	590.5	622.8	633.5
60°	503.3	520.9	547.4	580.7	591.4
62.5°	455.3	473.0	502.3	536.6	546.4
65°	407.3	426.0	455.3	493.5	503.3
67.5°	358.4	377.0	408.3	448.5	459.2
70°	308.4	329.0	362.3	402.5	412.2
72.5°	256.6	280.1	317.3	356.4	368.2
75°	207.6	231.1	270.3	310.4	322.2
77.5°	159.6	186.0	225.2	267.3	280.1
80°	114.6	141.0	182.1	223.3	235.0
82.5°	73.4	100.9	142.0	181.2	190.9
85°	39.2	64.6	101.8	126.3	130.2
87.5°	12.7	33.3	46.0	60.7	61.7
90°	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P1588249

CATALOG NUMBER: 24CZSP-37HE-L945

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	13.65	15.32	14.02	15.64	15.95	14.37	16.04	14.74	16.36	16.67
	3H	15.44	16.95	15.81	17.28	17.64	16.54	18.06	16.91	18.38	18.74
	4H	16.07	17.50	16.47	17.85	18.22	17.47	18.90	17.87	19.25	19.63
	6H	16.49	17.82	16.90	18.19	18.58	18.33	19.66	18.74	20.03	20.42
	8H	16.60	17.88	17.03	18.26	18.66	18.71	19.98	19.13	20.37	20.77
	12H	16.66	17.88	17.09	18.26	18.69	19.02	20.24	19.45	20.62	21.05
4H	2H	14.41	15.85	14.81	16.19	16.57	14.97	16.41	15.37	16.75	17.13
	3H	16.44	17.65	16.85	18.04	18.44	17.39	18.60	17.80	18.99	19.39
	4H	17.20	18.30	17.63	18.71	19.14	18.49	19.59	18.92	20.00	20.44
	6H	17.75	18.72	18.21	19.16	19.61	19.53	20.50	19.98	20.93	21.39
	8H	17.91	18.82	18.37	19.26	19.72	20.00	20.90	20.45	21.34	21.80
	12H	18.01	18.83	18.49	19.30	19.77	20.39	21.21	20.87	21.68	22.15
8H	4H	17.69	18.59	18.15	19.03	19.50	18.81	19.71	19.27	20.15	20.62
	6H	18.40	19.15	18.89	19.64	20.11	20.03	20.78	20.52	21.27	21.74
	8H	18.64	19.32	19.14	19.82	20.31	20.62	21.30	21.13	21.81	22.29
	12H	18.81	19.41	19.31	19.90	20.46	21.16	21.77	21.67	22.26	22.81
12H	4H	17.79	18.61	18.27	19.08	19.55	18.84	19.65	19.32	20.13	20.60
	6H	18.56	19.24	19.06	19.74	20.23	20.09	20.77	20.60	21.27	21.76
	8H	18.88	19.48	19.39	19.97	20.53	20.76	21.37	21.27	21.86	22.41