

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: P1588488

Luminaire Tested: 24CZSP-65VHE-L945-S

Issue Date: 9/3/2026

Test Information

Test Method: LM-79-2019
Report Number: P1588488
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-65VHE-L945-S
Description: 2x4 CZSP LED Luminaire, 4500K CCT and 7000 lumens, 90CRI, Smooth Lens
Light Source: -
Ballast/Driver: -

Summary

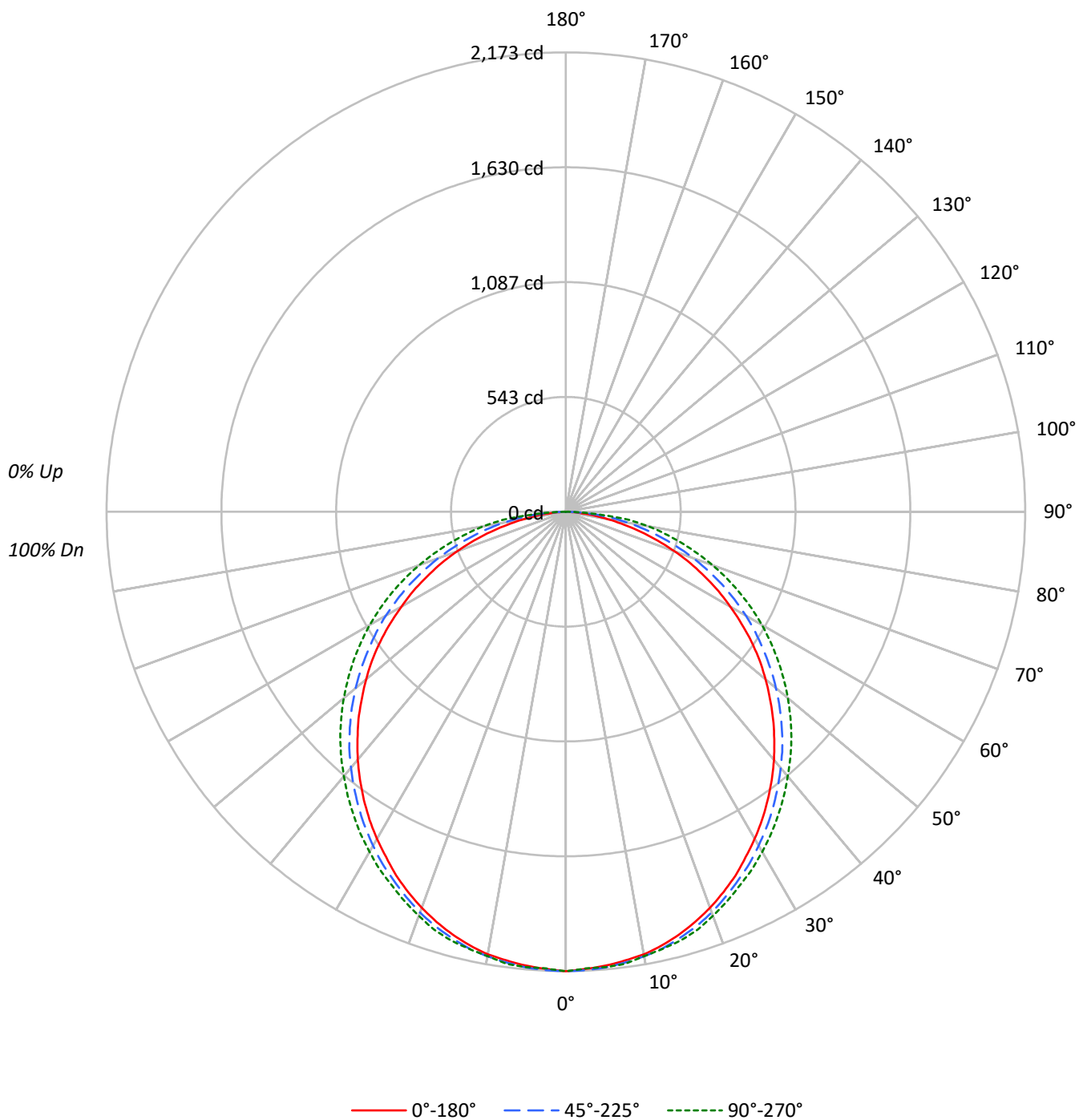
Lumens per Lamp: N/A
Luminaire Lumens: 6345.0 lumens
Efficiency: N/A
Efficacy: 126.6 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.27 / 1.37
Luminous Opening: Rectangular (W 1.83' x L: 3.83' x H: 0')
CIE Type: Direct

Input Watts (W): 50.1
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: P1588488

CATALOG NUMBER: 24CZSP-65VHE-L945-S

Luminous Intensity Polar Plot



TEST NUMBER: P1588488

CATALOG NUMBER: 24CZSP-65VHE-L945-S

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°	3329	3329	3329
5°	3314	3326	3324
10°	3306	3322	3319
15°	3283	3309	3329
20°	3250	3288	3315
25°	3209	3254	3294
30°	3159	3226	3285
35°	3114	3194	3275
40°	3062	3162	3265
45°	3004	3130	3269
50°	2939	3092	3268
55°	2863	3049	3272
60°	2755	3015	3280
65°	2629	2957	3290
70°	2450	2874	3304
75°	2184	2760	3337
80°	1806	2628	3500
85°	1174	2374	3058

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°

Vertical Angle: 82.5°

Luminance: 3611 cd/sqm

TEST NUMBER: P1588488

CATALOG NUMBER: 24CZSP-65VHE-L945-S

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	205.5	3.2
10°-20°	588.5	9.3
20°-30°	887.6	14.0
30°-40°	1069.1	16.8
40°-50°	1116.5	17.6
50°-60°	1025.4	16.2
60°-70°	807.6	12.7
70°-80°	495.5	7.8
80°-90°	149.1	2.3
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°	1681.7	26.5
0°-40°	2750.8	43.4
0°-60°	4892.8	77.1
0°-90°	6345.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6345.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2173	2173	2173	2173	2173	
5°	2155	2158	2164	2170	2162	205
15°	2070	2074	2087	2100	2100	584
25°	1899	1903	1926	1949	1949	874
35°	1665	1674	1708	1743	1752	1042
45°	1387	1402	1445	1495	1509	1069
55°	1072	1092	1142	1206	1225	957
65°	725	750	816	884	908	718
75°	369	398	466	540	564	391
85°	67	92	135	171	174	87
90°	0	0	0	0	0	

TEST NUMBER: P1588488

CATALOG NUMBER: 24CZSP-65VHE-L945-S

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2173.3	2173.3	2173.3	2173.3	2173.3
2.5°	2165.0	2169.2	2170.5	2171.9	2162.2
5°	2155.2	2158.0	2163.6	2170.5	2162.2
7.5°	2141.3	2144.1	2151.1	2160.8	2156.6
10°	2126.0	2127.4	2135.7	2142.7	2134.3
12.5°	2100.9	2105.1	2114.9	2120.4	2117.6
15°	2070.3	2074.5	2087.0	2099.5	2099.5
17.5°	2034.1	2039.7	2055.0	2071.7	2073.1
20°	1993.7	1997.9	2017.4	2034.1	2034.1
22.5°	1947.8	1953.4	1972.8	1990.9	1993.7
25°	1899.1	1903.2	1925.5	1949.2	1949.2
27.5°	1842.0	1850.3	1878.2	1901.8	1907.4
30°	1786.3	1793.2	1823.9	1853.1	1857.3
32.5°	1727.8	1736.2	1768.2	1800.2	1807.2
35°	1665.2	1673.5	1708.3	1743.1	1751.5
37.5°	1599.7	1609.5	1645.7	1686.0	1694.4
40°	1531.5	1542.6	1581.6	1624.8	1633.1
42.5°	1459.1	1474.4	1516.2	1560.7	1573.3
45°	1386.7	1402.0	1445.2	1495.3	1509.2
47.5°	1310.1	1328.2	1372.8	1425.7	1441.0
50°	1233.6	1251.6	1297.6	1354.7	1371.4
52.5°	1155.6	1173.7	1221.0	1280.9	1299.0
55°	1072.0	1091.5	1141.7	1205.7	1225.2
57.5°	985.7	1010.8	1063.7	1129.1	1148.6
60°	899.4	924.5	984.3	1048.4	1070.7
62.5°	814.5	838.1	899.4	967.6	991.3
65°	725.4	750.4	815.9	884.1	907.8
67.5°	637.7	662.7	728.2	799.2	824.2
70°	547.2	575.0	641.8	712.8	737.9
72.5°	456.7	485.9	554.1	626.5	650.2
75°	369.0	398.2	466.4	540.2	563.9
77.5°	282.6	314.7	381.5	456.7	478.9
80°	204.7	235.3	297.9	371.7	396.8
82.5°	130.9	157.3	220.0	289.6	307.7
85°	66.8	91.9	135.1	171.2	174.0
87.5°	20.9	29.2	44.6	66.8	68.2
90°	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P1588488

CATALOG NUMBER: 24CZSP-65VHE-L945-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	15.66	17.32	16.02	17.63	17.95	16.49	18.15	16.85	18.46	18.78
	3H	17.41	18.92	17.79	19.25	19.60	18.60	20.11	18.98	20.44	20.80
	4H	18.03	19.45	18.43	19.80	20.17	19.49	20.91	19.89	21.26	21.64
	6H	18.44	19.76	18.85	20.13	20.52	20.27	21.59	20.68	21.96	22.35
	8H	18.55	19.81	18.97	20.20	20.60	20.59	21.86	21.02	22.24	22.64
	12H	18.60	19.81	19.03	20.19	20.62	20.80	22.01	21.23	22.40	22.82
4H	2H	16.43	17.85	16.83	18.20	18.57	17.07	18.50	17.47	18.84	19.22
	3H	18.41	19.60	18.81	20.00	20.40	19.43	20.63	19.84	21.02	21.42
	4H	19.14	20.23	19.57	20.64	21.08	20.48	21.57	20.91	21.98	22.41
	6H	19.67	20.62	20.12	21.06	21.52	21.43	22.39	21.89	22.83	23.28
	8H	19.82	20.71	20.28	21.15	21.61	21.83	22.72	22.29	23.16	23.63
	12H	19.90	20.70	20.38	21.18	21.65	22.11	22.91	22.59	23.39	23.85
8H	4H	19.60	20.49	20.06	20.93	21.40	20.77	21.66	21.23	22.10	22.57
	6H	20.26	21.01	20.75	21.49	21.97	21.88	22.63	22.37	23.11	23.59
	8H	20.47	21.14	20.98	21.65	22.13	22.39	23.06	22.90	23.57	24.05
	12H	20.61	21.20	21.12	21.69	22.25	22.78	23.37	23.28	23.86	24.42
12H	4H	19.69	20.49	20.17	20.97	21.44	20.79	21.60	21.27	22.07	22.54
	6H	20.39	21.06	20.90	21.57	22.05	21.93	22.60	22.44	23.10	23.59
	8H	20.67	21.26	21.18	21.75	22.31	22.51	23.10	23.01	23.59	24.15