

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: P1588768

Luminaire Tested: 24CZSP-A-60VHE-L945-S

Issue Date: 9/3/2026

Test Information

Test Method: LM-79-2019
Report Number: P1588768
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-A-60VHE-L945-S
Description: 2x4 CZSP LED Luminaire, 4500K CCT and 6000 lumens, 90CRI, Smooth Lens, Air Vented Housing
Light Source: -
Ballast/Driver: -

Summary

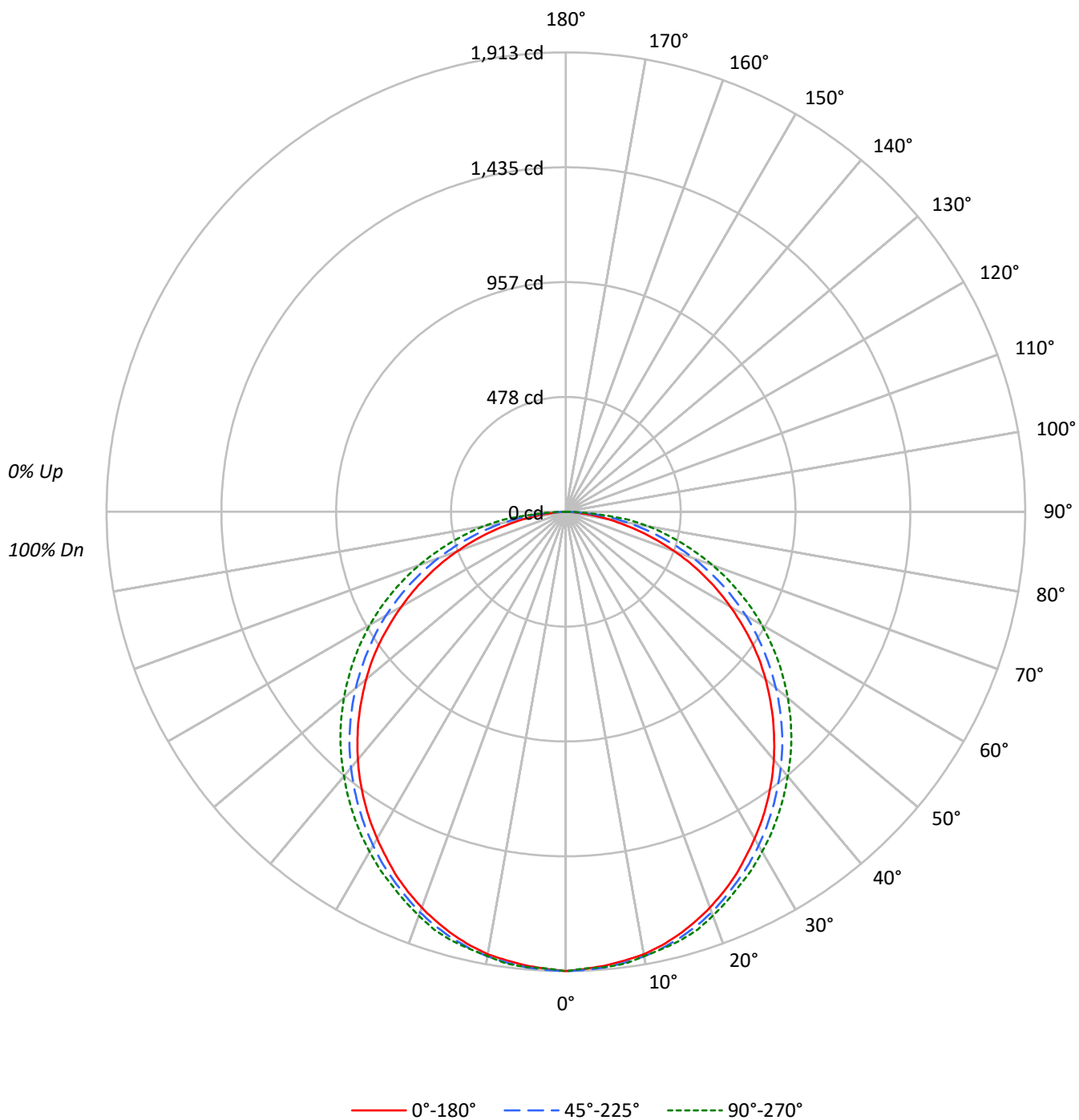
Lumens per Lamp: N/A
Luminaire Lumens: 5584.0 lumens
Efficiency: N/A
Efficacy: 128.4 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.27 / 1.37
Luminous Opening: Rectangular (W 1.83' x L: 3.83' x H: 0')
CIE Type: Direct

Input Watts (W): 43.5
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°	2930	2930	2930
5°	2916	2928	2926
10°	2910	2923	2921
15°	2889	2912	2930
20°	2860	2894	2918
25°	2824	2864	2899
30°	2780	2839	2891
35°	2740	2811	2882
40°	2695	2783	2874
45°	2643	2755	2877
50°	2587	2721	2876
55°	2519	2683	2879
60°	2425	2654	2886
65°	2314	2602	2895
70°	2156	2530	2908
75°	1921	2429	2936
80°	1589	2313	3080
85°	1033	2089	2692

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°

Vertical Angle: 82.5°

Luminance: 3178 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	180.9	3.2
10°-20°	518.0	9.3
20°-30°	781.2	14.0
30°-40°	940.9	16.8
40°-50°	982.6	17.6
50°-60°	902.4	16.2
60°-70°	710.8	12.7
70°-80°	436.0	7.8
80°-90°	131.2	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°	1480.0	26.5
0°-40°	2420.9	43.4
0°-60°	4305.9	77.1
0°-90°	5584.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5584.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1913	1913	1913	1913	1913	
5°	1897	1899	1904	1910	1903	180
15°	1822	1826	1837	1848	1848	514
25°	1671	1675	1695	1715	1715	769
35°	1465	1473	1503	1534	1541	917
45°	1220	1234	1272	1316	1328	941
55°	944	961	1005	1061	1078	842
65°	638	660	718	778	799	632
75°	325	350	410	475	496	344
85°	59	81	119	151	153	77
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1912.7	1912.7	1912.7	1912.7	1912.7
2.5°	1905.3	1909.0	1910.2	1911.4	1902.9
5°	1896.7	1899.2	1904.1	1910.2	1902.9
7.5°	1884.5	1886.9	1893.1	1901.6	1898.0
10°	1871.0	1872.2	1879.6	1885.7	1878.4
12.5°	1849.0	1852.6	1861.2	1866.1	1863.7
15°	1822.0	1825.7	1836.7	1847.7	1847.7
17.5°	1790.1	1795.0	1808.5	1823.2	1824.4
20°	1754.6	1758.3	1775.4	1790.1	1790.1
22.5°	1714.2	1719.1	1736.2	1752.2	1754.6
25°	1671.3	1675.0	1694.6	1715.4	1715.4
27.5°	1621.1	1628.4	1652.9	1673.7	1678.6
30°	1572.0	1578.2	1605.1	1630.9	1634.5
32.5°	1520.6	1527.9	1556.1	1584.3	1590.4
35°	1465.4	1472.8	1503.4	1534.1	1541.4
37.5°	1407.9	1416.4	1448.3	1483.8	1491.2
40°	1347.8	1357.6	1391.9	1429.9	1437.3
42.5°	1284.1	1297.6	1334.3	1373.5	1384.6
45°	1220.4	1233.9	1271.8	1316.0	1328.2
47.5°	1153.0	1168.9	1208.1	1254.7	1268.2
50°	1085.6	1101.5	1142.0	1192.2	1206.9
52.5°	1017.0	1032.9	1074.6	1127.3	1143.2
55°	943.5	960.6	1004.7	1061.1	1078.3
57.5°	867.5	889.6	936.1	993.7	1010.9
60°	791.5	813.6	866.3	922.6	942.2
62.5°	716.8	737.6	791.5	851.6	872.4
65°	638.4	660.4	718.0	778.1	798.9
67.5°	561.2	583.2	640.8	703.3	725.4
70°	481.5	506.0	564.9	627.3	649.4
72.5°	401.9	427.6	487.7	551.4	572.2
75°	324.7	350.4	410.5	475.4	496.2
77.5°	248.7	276.9	335.7	401.9	421.5
80°	180.1	207.1	262.2	327.2	349.2
82.5°	115.2	138.5	193.6	254.9	270.8
85°	58.8	80.9	118.9	150.7	153.2
87.5°	18.4	25.7	39.2	58.8	60.0
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	15.21	16.87	15.58	17.19	17.50	16.04	17.70	16.41	18.02	18.33
	3H	16.97	18.48	17.34	18.80	19.16	18.16	19.67	18.54	19.99	20.35
	4H	17.59	19.01	17.98	19.36	19.73	19.05	20.47	19.45	20.82	21.19
	6H	18.00	19.32	18.41	19.68	20.07	19.83	21.15	20.24	21.51	21.90
	8H	18.11	19.37	18.53	19.76	20.15	20.15	21.41	20.57	21.80	22.20
	12H	18.16	19.37	18.59	19.75	20.18	20.36	21.57	20.79	21.95	22.38
4H	2H	15.98	17.41	16.38	17.75	18.13	16.63	18.05	17.03	18.40	18.77
	3H	17.96	19.16	18.37	19.56	19.96	18.99	20.18	19.39	20.58	20.98
	4H	18.70	19.78	19.13	20.20	20.63	20.04	21.12	20.47	21.54	21.97
	6H	19.23	20.18	19.68	20.62	21.07	20.99	21.94	21.44	22.38	22.84
	8H	19.37	20.27	19.83	20.71	21.17	21.39	22.28	21.85	22.72	23.18
	12H	19.46	20.26	19.94	20.73	21.20	21.66	22.47	22.14	22.94	23.41
8H	4H	19.16	20.05	19.62	20.49	20.95	20.33	21.22	20.79	21.66	22.12
	6H	19.82	20.56	20.31	21.05	21.52	21.44	22.18	21.93	22.67	23.14
	8H	20.03	20.70	20.54	21.20	21.69	21.95	22.62	22.46	23.12	23.61
	12H	20.17	20.76	20.67	21.25	21.81	22.34	22.93	22.84	23.42	23.98
12H	4H	19.25	20.05	19.73	20.52	20.99	20.35	21.15	20.83	21.63	22.10
	6H	19.95	20.62	20.46	21.12	21.61	21.49	22.16	21.99	22.66	23.14
	8H	20.23	20.82	20.73	21.31	21.87	22.06	22.66	22.57	23.15	23.70