

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: METALUX

Report Number: A1616668B001

Luminaire Tested: **24CZRK-LD4-50-UNV-L840-CD1-U**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: A1616668B001
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (A1616668B001)
Test Lab:
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZRK-LD4-50-UNV-L840-CD1-U
Description: 2X4 CRUZE LED RETROFIT, 5000 lum, 40K, U
Light Source: 7S14P CCT:4000K CRI:80
PCB_L-PL-A95-01-A-V2.0E lumens3030f©
Ballast/Driver: OSRAM
OPTOTRONIC OTI 50

Summary

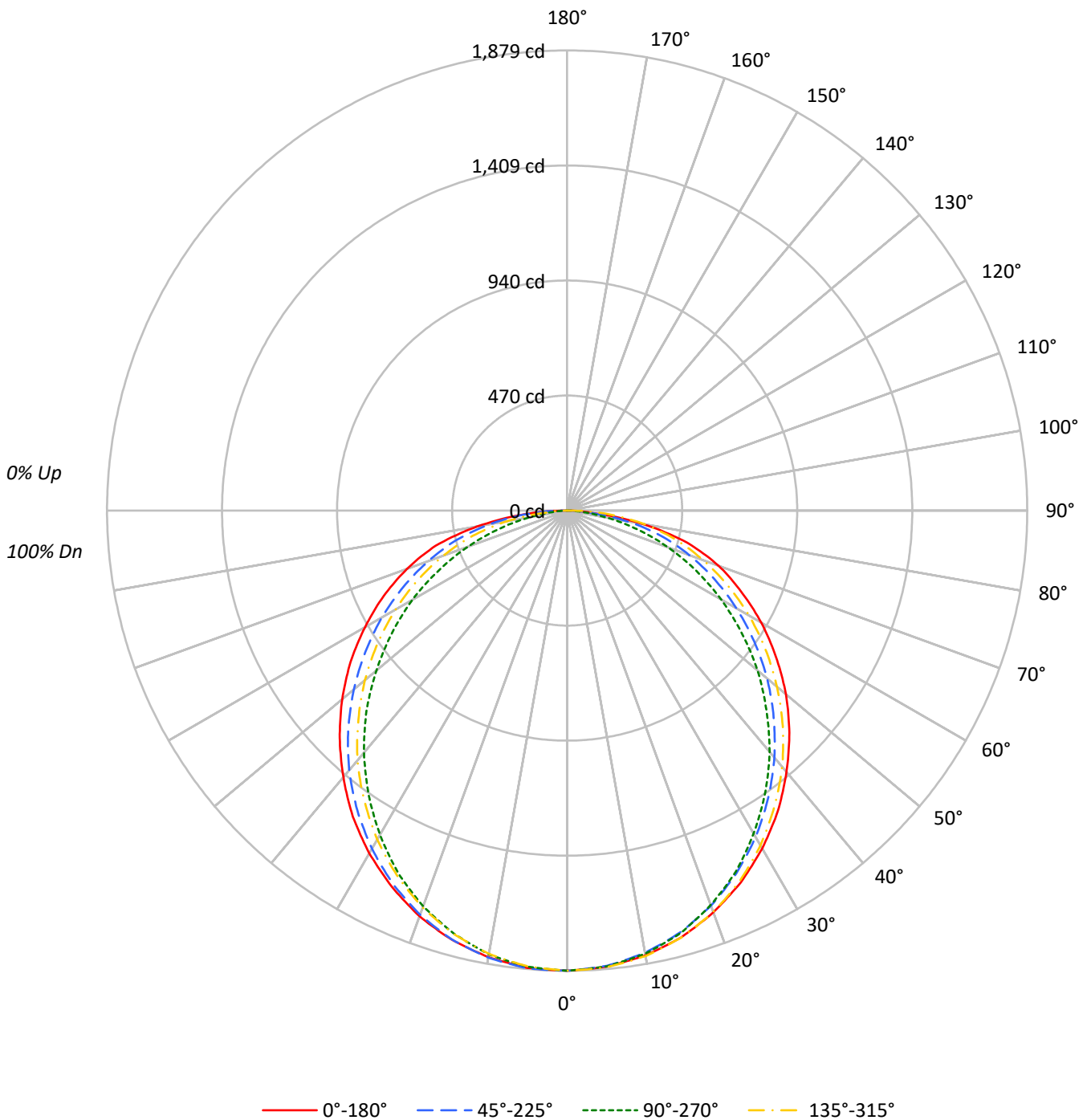
Lumens per Lamp: 5447.957 (1 lamp)
Luminaire Lumens: 5448.0 lumens
Efficiency: 100.0%
Efficacy: 117.5 lumens/watt
Spacing Criteria (0/90/45): 1.27 / 1.21 / 1.36
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 4' x H: 0.1')
CIE Type: Direct

Input Watts (W): 46.37
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: 25 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	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					100			
1	108	103	99	95	105	101	97	93	97	93	90	93	90	87	89	87	85	83					83			
2	98	90	82	77	95	88	81	76	84	79	74	81	76	72	78	74	70	68					68			
3	89	78	70	63	87	77	69	63	74	67	62	71	65	60	68	64	59	57					57			
4	82	69	60	53	79	68	60	53	65	58	52	63	57	52	61	55	51	49					49			
5	75	62	53	46	73	61	52	46	59	51	45	57	50	45	55	49	44	42					42			
6	69	56	47	40	67	55	46	40	53	45	39	51	44	39	50	44	39	37					37			
7	64	50	42	35	62	50	41	35	48	40	35	47	40	35	45	39	34	32					32			
8	60	46	37	31	58	45	37	31	44	37	31	43	36	31	42	35	31	29					29			
9	56	42	34	28	54	42	34	28	40	33	28	39	33	28	38	32	28	26					26			
10	52	39	31	26	51	38	31	26	37	30	25	37	30	25	36	30	25	23					23			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	2528	2528	2528	2528
5°	2519	2512	2526	2513
10°	2508	2488	2518	2492
15°	2496	2456	2512	2458
20°	2477	2411	2502	2418
25°	2459	2362	2487	2370
30°	2439	2300	2474	2308
35°	2420	2236	2462	2244
40°	2397	2169	2445	2176
45°	2383	2085	2438	2100
50°	2370	2004	2438	2008
55°	2356	1903	2446	1914
60°	2362	1797	2459	1808
65°	2369	1672	2501	1663
70°	2423	1512	2561	1494
75°	2415	1301	2647	1246
80°	2121	978	2522	921
85°	1123	510	2094	500



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ZONAL LUMENS:

CANDELA DISTRIBUTION:

Zone	Lumens	% Fixture	% Lamp		0°	90°	180°	270°	360°	Flux
0°-10°	177.6	3.3	3.3	0°	1879	1879	1879	1879	1879	
10°-20°	507.2	9.3	9.3	5°	1869	1868	1874	1869	1869	178
20°-30°	763.8	14.0	14.0	15°	1804	1787	1815	1788	1804	509
30°-40°	914.8	16.8	16.8	25°	1676	1628	1695	1633	1676	772
40°-50°	947.0	17.4	17.4	35°	1499	1409	1525	1414	1499	938
50°-60°	865.5	15.9	15.9	45°	1283	1150	1314	1159	1283	991
60°-70°	691.0	12.7	12.7	55°	1040	869	1080	874	1040	932
70°-80°	444.4	8.2	8.2	65°	784	582	828	578	784	778
80°-90°	136.6	2.5	2.5	75°	508	297	557	284	508	524
90°-100°	0.0	0.0	0.0	85°	94	52	174	51	94	136
100°-110°	0.0	0.0	0.0	90°	2	2	5	2	2	
110°-120°	0.0	0.0	0.0							
120°-130°	0.0	0.0	0.0							
130°-140°	0.0	0.0	0.0							
140°-150°	0.0	0.0	0.0							
150°-160°	0.0	0.0	0.0							
160°-170°	0.0	0.0	0.0							
170°-180°	0.0	0.0	0.0							
0°-30°	1448.6	26.6	26.6							
0°-40°	2363.4	43.4	43.4							
0°-60°	4176.0	76.7	76.7							
0°-90°	5448.0	100.0	100.0							
90°-120°	0.0	0.0	0.0							
90°-150°	0.0	0.0	0.0							
90°-180°	0.0	0.0	0.0							
0°-180°	5448.0	100.0	100.0							



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CANDELA DISTRIBUTION (FULL):

	0°	30°	60°	90°	120°	150°	180°	210°	240°	270°	300°
0°	1878.8	1878.8	1878.8	1878.8	1878.8	1878.8	1878.8	1878.8	1878.8	1878.8	1878.8
5°	1869.0	1868.0	1863.9	1868.0	1869.0	1874.2	1874.2	1875.3	1876.3	1869.0	1869.0
10°	1844.1	1838.9	1827.5	1836.9	1840.0	1853.5	1851.4	1854.5	1852.4	1840.0	1838.9
15°	1803.6	1792.2	1774.6	1787.0	1791.2	1817.1	1815.1	1817.1	1810.9	1788.1	1791.2
20°	1745.5	1732.0	1701.9	1714.3	1727.8	1761.1	1763.1	1761.1	1751.7	1719.5	1723.7
25°	1675.9	1653.1	1615.7	1628.2	1643.7	1693.6	1694.6	1692.5	1672.8	1633.3	1641.6
30°	1592.8	1563.8	1515.0	1523.3	1548.2	1608.4	1615.7	1607.4	1581.4	1528.5	1545.1
35°	1499.4	1464.1	1399.7	1409.1	1437.1	1513.9	1525.4	1511.9	1476.5	1414.2	1432.9
40°	1393.5	1355.1	1278.2	1286.5	1322.9	1409.1	1421.5	1407.0	1362.3	1290.7	1317.7
45°	1283.4	1234.6	1150.5	1150.5	1193.1	1296.9	1313.5	1294.8	1233.6	1158.8	1184.8
50°	1166.1	1113.1	1018.6	1014.5	1062.2	1174.4	1199.3	1171.3	1102.7	1016.6	1052.9
55°	1040.4	987.5	877.4	869.1	924.1	1052.9	1079.9	1047.7	963.6	874.3	911.7
60°	915.8	854.6	740.4	725.8	788.1	927.3	953.2	921.0	826.5	730.0	773.6
65°	784.0	724.8	603.3	581.5	651.1	795.4	827.6	787.1	688.4	578.4	635.5
70°	658.3	596.0	464.1	437.2	511.9	666.6	695.7	657.3	547.2	432.0	493.2
75°	507.8	456.9	334.4	297.0	382.1	538.9	556.6	527.5	413.3	284.5	361.4
80°	312.5	283.5	206.6	162.0	259.6	383.2	371.7	358.2	285.5	152.6	231.6
85°	93.5	81.0	72.7	51.9	133.9	204.6	174.4	183.8	143.3	50.9	90.3
90°	2.1	2.1	1.0	2.1	9.3	13.5	5.2	6.2	6.2	2.1	2.1



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CANDELA DISTRIBUTION (continued):

	330°	360°
0°	1878.8	1878.8
5°	1865.9	1869.0
10°	1836.9	1844.1
15°	1788.1	1803.6
20°	1726.8	1745.5
25°	1646.8	1675.9
30°	1556.5	1592.8
35°	1456.8	1499.4
40°	1346.8	1393.5
45°	1226.3	1283.4
50°	1102.7	1166.1
55°	977.1	1040.4
60°	843.1	915.8
65°	712.3	784.0
70°	582.5	658.3
75°	437.2	507.8
80°	261.7	312.5
85°	68.5	93.5
90°	2.1	2.1

(END OF REPORT)