

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: A1616668C001

Luminaire Tested: **24CZRK-LD4-40-UNV-L835-CD1-U**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: A1616668C001
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (A1616668C001)
Test Lab:
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZRK-LD4-40-UNV-L835-CD1-U
Description: 2X4 CRUZE LED RETROFIT, 4000 lum, 35K, U
Light Source: 7S11P CCT:3500K CRI:80
PCB_L-PL-A95-03-A-V2.0E lumens3030E©
Ballast/Driver: OSRAM
OPTOTRONIC OTI 30

Summary

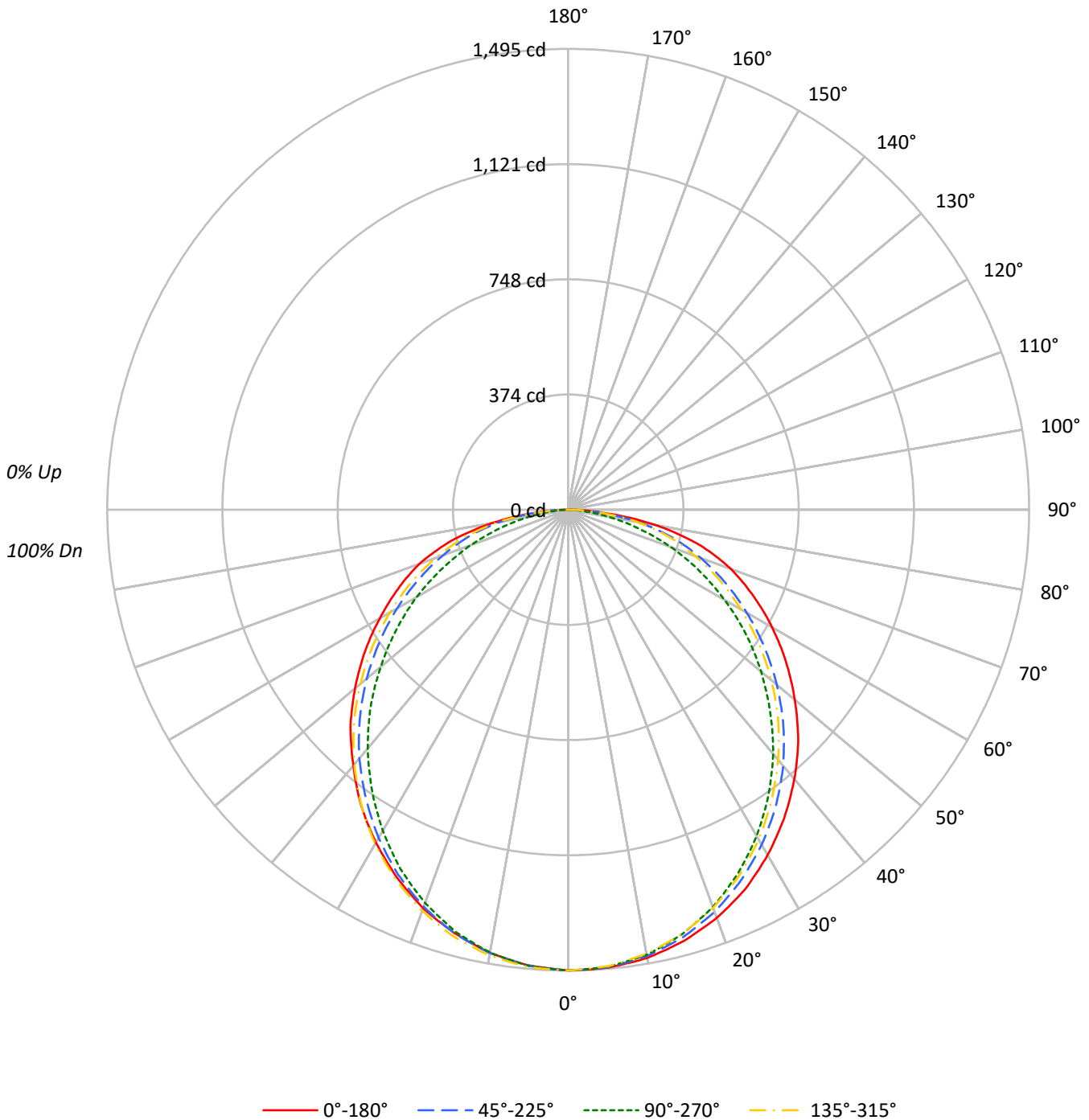
Lumens per Lamp: 4313.284 (1 lamp)
Luminaire Lumens: 4313.3 lumens
Efficiency: 100.0%
Efficacy: 118.6 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 1.21 / 1.36
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 4' x H: 0.1')
CIE Type: Direct

Input Watts (W): 36.366
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	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	105	101	97	93	97	93	90	93	90	87	89	87	85	83
2	98	90	83	77	95	88	81	76	84	79	74	81	76	72	78	74	71	68
3	89	78	70	63	87	77	69	63	74	67	62	71	65	61	68	64	59	57
4	82	69	60	54	79	68	60	53	65	58	52	63	57	52	61	55	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	51	42	35	62	50	41	35	48	41	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	41	33	28	39	33	28	38	32	28	26
10	52	39	31	26	51	39	31	26	38	30	26	37	30	25	36	30	25	24

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	2011	2011	2011	2011
5°	2010	2001	2000	1997
10°	2008	1986	1986	1976
15°	2004	1960	1968	1947
20°	1999	1929	1952	1908
25°	1993	1889	1931	1866
30°	1981	1846	1910	1816
35°	1971	1796	1891	1762
40°	1963	1743	1865	1705
45°	1959	1678	1854	1643
50°	1950	1612	1834	1569
55°	1954	1541	1825	1491
60°	1971	1450	1818	1407
65°	2002	1349	1842	1290
70°	2068	1225	1892	1160
75°	2098	1037	1876	983
80°	1966	796	1705	721
85°	1346	418	1147	398



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ZONAL LUMENS:

CANDELA DISTRIBUTION:

Zone	Lumens	% Fixture	% Lamp		0°	90°	180°	270°	360°	Flux
0°-10°	141.3	3.3	3.3	0°	1495	1495	1495	1495	1495	
10°-20°	403.1	9.3	9.3	5°	1491	1488	1484	1485	1491	142
20°-30°	606.5	14.1	14.1	15°	1448	1426	1423	1416	1448	409
30°-40°	725.3	16.8	16.8	25°	1358	1302	1316	1286	1358	626
40°-50°	749.7	17.4	17.4	35°	1221	1132	1171	1110	1221	764
50°-60°	682.8	15.8	15.8	45°	1055	926	999	906	1055	814
60°-70°	544.7	12.6	12.6	55°	863	704	806	681	863	772
70°-80°	352.0	8.2	8.2	65°	662	469	610	449	662	657
80°-90°	107.9	2.5	2.5	75°	441	237	395	224	441	458
90°-100°	0.0	0.0	0.0	85°	112	43	96	40	112	140
100°-110°	0.0	0.0	0.0	90°	2	1	2	1	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°	1150.9	26.7	26.7							
0°-40°	1876.2	43.5	43.5							
0°-60°	3308.6	76.7	76.7							
0°-90°	4313.3	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°	4313.3	100.0	100.0							



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CANDELA DISTRIBUTION (FULL):

	0°	30°	60°	90°	120°	150°	180°	210°	240°	270°	300°
0°	1494.7	1494.7	1494.7	1494.7	1494.7	1494.7	1494.7	1494.7	1494.7	1494.7	1494.7
5°	1491.1	1491.1	1488.0	1488.0	1485.9	1486.9	1483.8	1483.8	1485.9	1484.9	1489.0
10°	1476.5	1474.5	1466.2	1466.2	1459.9	1465.1	1459.9	1458.9	1462.0	1458.9	1466.2
15°	1448.5	1444.4	1427.7	1425.7	1420.5	1428.8	1422.6	1422.6	1423.6	1416.3	1430.9
20°	1409.1	1400.7	1375.8	1371.7	1366.5	1382.1	1375.8	1372.7	1368.6	1357.1	1377.9
25°	1358.2	1344.7	1308.3	1302.1	1298.0	1322.9	1315.6	1308.3	1303.1	1286.5	1314.6
30°	1293.8	1278.2	1231.5	1222.2	1220.1	1250.2	1247.1	1236.7	1222.2	1202.4	1238.8
35°	1221.1	1202.4	1145.3	1131.8	1128.7	1171.3	1171.3	1152.6	1134.9	1110.0	1153.6
40°	1141.2	1117.3	1051.9	1034.2	1034.2	1084.0	1084.0	1065.4	1041.5	1011.4	1057.1
45°	1055.0	1022.8	950.1	926.2	932.4	993.7	998.9	971.9	939.7	906.5	956.3
50°	959.4	926.2	840.0	816.2	826.5	893.0	902.3	874.3	830.7	794.3	851.5
55°	862.9	822.4	731.0	704.0	714.4	793.3	805.8	770.5	722.7	681.2	740.4
60°	764.2	720.6	616.8	585.6	604.3	688.4	705.0	668.7	612.6	568.0	631.3
65°	662.5	619.9	506.7	469.3	495.3	588.8	609.5	570.1	499.5	448.6	523.3
70°	561.8	514.0	399.8	354.1	384.2	491.1	514.0	469.3	393.5	335.4	413.3
75°	441.3	409.1	292.8	236.7	283.5	392.5	394.6	370.7	291.8	224.3	310.5
80°	289.7	267.9	193.1	131.9	189.0	261.7	251.3	243.0	195.2	119.4	207.7
85°	112.1	112.1	84.1	42.6	84.1	114.2	95.5	104.9	91.4	40.5	91.4
90°	2.1	2.1	2.1	1.0	2.1	3.1	2.1	3.1	3.1	1.0	2.1



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CANDELA DISTRIBUTION (continued):

	330°	360°
0°	1494.7	1494.7
5°	1489.0	1491.1
10°	1470.3	1476.5
15°	1437.1	1448.5
20°	1391.4	1409.1
25°	1332.2	1358.2
30°	1264.7	1293.8
35°	1185.8	1221.1
40°	1100.7	1141.2
45°	1009.3	1055.0
50°	908.6	959.4
55°	808.9	862.9
60°	704.0	764.2
65°	603.3	662.5
70°	500.5	561.8
75°	389.4	441.3
80°	248.2	289.7
85°	93.5	112.1
90°	2.1	2.1

(END OF REPORT)