

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: A1616668D001

Luminaire Tested: **24CZRK-LD4-40-UNV-L840-CD1-U**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: A1616668D001
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (A1616668D001)
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZRK-LD4-40-UNV-L840-CD1-U
Description: 2X4 CRUZE LED RETROFIT, 4000 lum, 40K, U
Light Source: -
Ballast/Driver: -

Summary

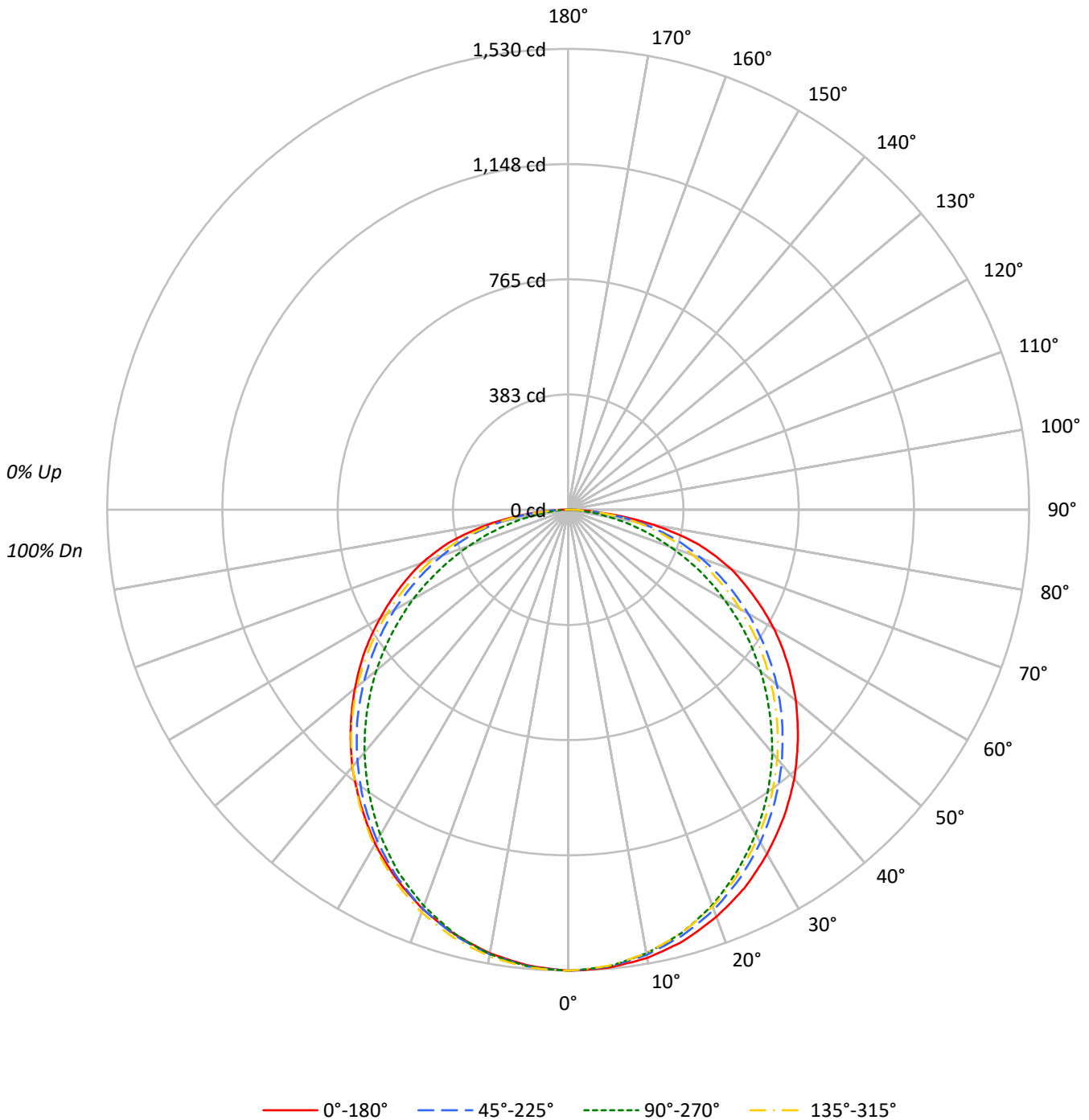
Lumens per Lamp: 4421.277 (1 lamp)
Luminaire Lumens: 4421.3 lumens
Efficiency: 100.0%
Efficacy: 120.8 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 1.21 / 1.36
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 4' x H: 0.1')
CIE Type: Direct

Input Watts (W): 36.606
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

TEST NUMBER: A1616668D001

CATALOG NUMBER: 24CZRK-LD4-40-UNV-L840-CD1-U

Luminous Intensity Polar Plot





TEST NUMBER: A1616668D001

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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	60	57
4	82	69	60	54	79	68	60	53	66	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	38	31	26	37	30	26	37	30	25	36	30	25	24

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	2059	2059	2059	2059
5°	2057	2047	2047	2047
10°	2055	2025	2034	2029
15°	2050	2000	2019	2002
20°	2041	1965	2002	1968
25°	2033	1922	1982	1930
30°	2021	1878	1962	1883
35°	2013	1829	1936	1827
40°	2008	1777	1917	1773
45°	2001	1711	1895	1711
50°	2005	1647	1878	1643
55°	2013	1576	1870	1560
60°	2033	1484	1859	1471
65°	2055	1385	1867	1349
70°	2118	1243	1900	1207
75°	2138	1074	1896	1019
80°	1945	828	1720	733
85°	1246	438	1272	388



TEST NUMBER: A1616668D001

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ZONAL LUMENS:

CANDELA DISTRIBUTION:

Zone	Lumens	% Fixture	% Lamp		0°	90°	180°	270°	360°	Flux
0°-10°	144.6	3.3	3.3	0°	1530	1530	1530	1530	1530	
10°-20°	412.7	9.3	9.3	5°	1526	1522	1519	1522	1526	145
20°-30°	621.1	14.0	14.0	15°	1482	1455	1459	1457	1482	418
30°-40°	743.4	16.8	16.8	25°	1385	1325	1351	1330	1385	638
40°-50°	769.8	17.4	17.4	35°	1247	1153	1199	1152	1247	781
50°-60°	703.8	15.9	15.9	45°	1078	944	1021	944	1078	833
60°-70°	560.2	12.7	12.7	55°	889	720	826	712	889	795
70°-80°	358.1	8.1	8.1	65°	680	482	618	469	680	675
80°-90°	107.7	2.4	2.4	75°	450	245	399	233	450	465
90°-100°	0.0	0.0	0.0	85°	104	45	106	40	104	135
100°-110°	0.0	0.0	0.0	90°	2	2	2	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°	1178.3	26.7	26.7							
0°-40°	1921.7	43.5	43.5							
0°-60°	3395.3	76.8	76.8							
0°-90°	4421.3	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°	4421.3	100.0	100.0							



TEST NUMBER: A1616668D001

CATALOG NUMBER: 24CZRK-LD4-40-UNV-L840-CD1-U

CANDELA DISTRIBUTION (FULL):

	0°	30°	60°	90°	120°	150°	180°	210°	240°	270°	300°
0°	1530.5	1530.5	1530.5	1530.5	1530.5	1530.5	1530.5	1530.5	1530.5	1530.5	1530.5
5°	1526.4	1524.3	1521.2	1522.2	1518.1	1522.2	1519.1	1520.2	1523.3	1522.2	1526.4
10°	1510.8	1504.6	1496.3	1495.2	1491.1	1498.4	1495.2	1497.3	1500.4	1498.4	1505.6
15°	1481.7	1472.4	1454.7	1454.7	1447.5	1461.0	1458.9	1461.0	1463.1	1456.8	1468.2
20°	1438.1	1426.7	1400.7	1397.6	1391.4	1412.2	1411.1	1409.1	1411.1	1399.7	1418.4
25°	1385.2	1367.5	1331.2	1324.9	1322.9	1348.8	1350.9	1346.8	1343.6	1330.1	1355.1
30°	1319.8	1298.0	1253.3	1244.0	1239.8	1276.1	1281.3	1271.0	1265.8	1247.1	1276.1
35°	1247.1	1221.1	1163.0	1152.6	1149.5	1195.2	1199.3	1188.9	1177.5	1151.5	1191.0
40°	1167.1	1136.0	1067.4	1053.9	1052.9	1106.9	1114.2	1099.6	1076.8	1051.9	1095.5
45°	1077.8	1043.6	965.7	943.9	949.1	1009.3	1020.7	1005.1	974.0	943.9	994.8
50°	986.4	947.0	860.8	833.8	838.0	910.6	924.1	905.5	861.8	831.7	884.7
55°	888.8	847.3	748.7	719.6	726.9	808.9	825.5	798.5	751.8	712.3	774.6
60°	788.1	741.4	637.6	599.1	615.7	700.9	720.6	693.6	638.6	593.9	659.4
65°	680.1	635.5	522.3	481.8	499.5	596.0	617.8	585.6	521.3	469.3	546.2
70°	575.3	525.4	413.3	359.3	390.4	488.0	516.1	480.8	409.1	348.9	434.0
75°	449.6	413.3	305.3	245.1	281.4	385.2	398.7	375.9	301.1	232.6	318.8
80°	286.6	270.0	200.4	137.1	182.8	259.6	253.4	239.9	203.5	121.5	211.8
85°	103.8	102.8	83.1	44.6	82.0	114.2	105.9	108.0	90.3	39.5	88.3
90°	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1



TEST NUMBER: A1616668D001

CATALOG NUMBER: 24CZRK-LD4-40-UNV-L840-CD1-U

CANDELA DISTRIBUTION (continued):

	330°	360°
0°	1530.5	1530.5
5°	1524.3	1526.4
10°	1505.6	1510.8
15°	1473.4	1481.7
20°	1425.7	1438.1
25°	1367.5	1385.2
30°	1298.0	1319.8
35°	1217.0	1247.1
40°	1130.8	1167.1
45°	1040.4	1077.8
50°	943.9	986.4
55°	838.0	888.8
60°	734.1	788.1
65°	627.2	680.1
70°	515.0	575.3
75°	398.7	449.6
80°	248.2	286.6
85°	91.4	103.8
90°	2.1	2.1

(END OF REPORT)