

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: A1616668G001

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

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: A1616668G001  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA ( A1616668G001)  
Test Lab: INNOVATION CENTER-P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZRK-LD4-40HP-UNV-L835-CD1-U  
Description: 24CRZ RETROFIT DLC Prem 4000 35K 0-10Dim  
Light Source: -  
Ballast/Driver: -

**Summary**

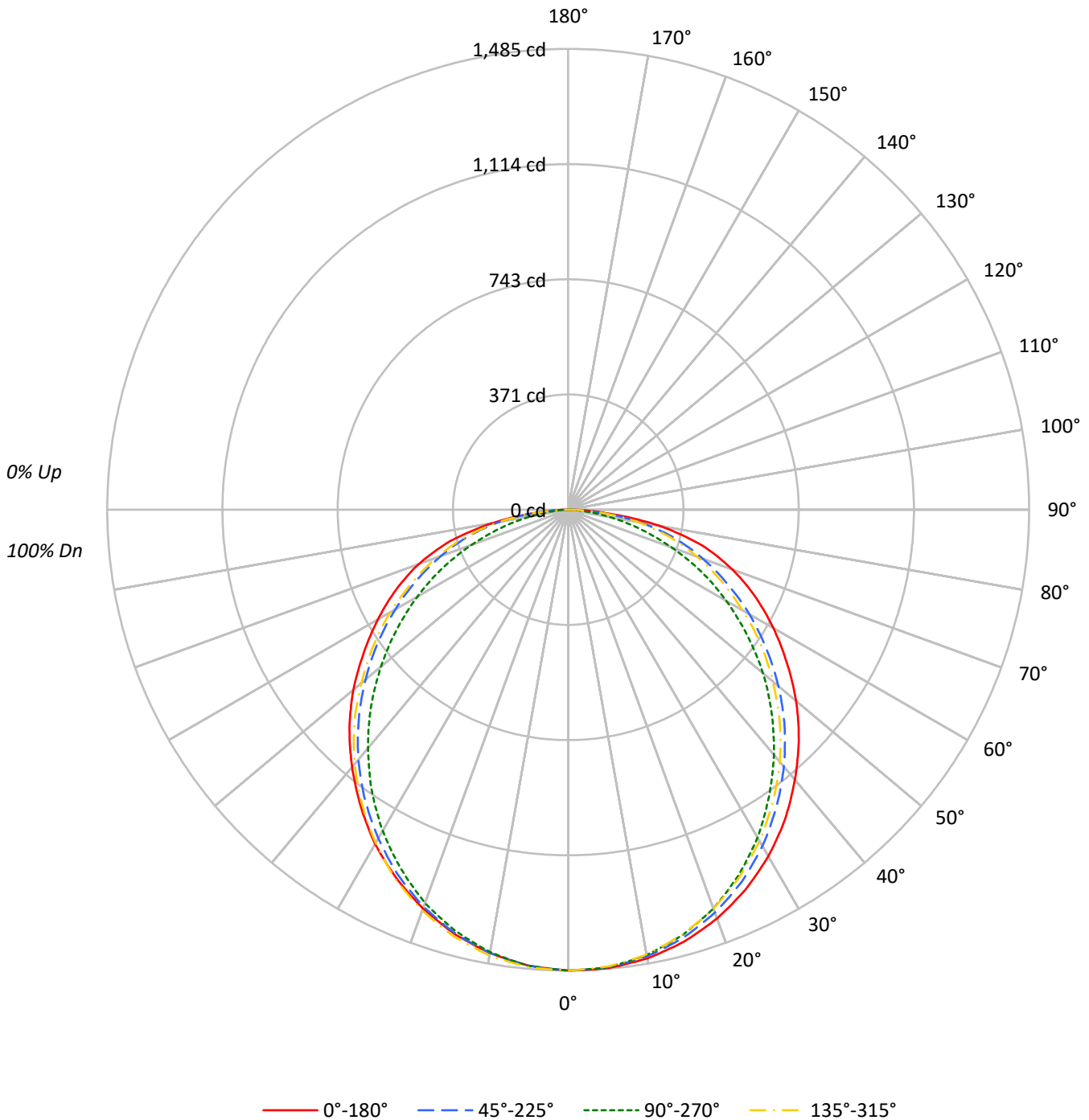
Lumens per Lamp: 4304.226 (1 lamp)  
Luminaire Lumens: 4304.2 lumens  
Efficiency: 100.0%  
Efficacy: 132.9 lumens/watt  
Spacing Criteria (0/90/45): 1.27 / 1.21 / 1.36  
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 4' x H: 0.1')  
CIE Type: Direct

Input Watts (W): 32.38  
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	82	76	95	88	81	76	84	79	74	81	76	72	78	74	70	68
3	89	78	70	63	87	77	69	63	74	67	62	71	65	60	68	64	59	57
4	82	69	60	53	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	39	51	44	39	50	43	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	31	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°	90°	180°	270°
0°	1998	1998	1998	1998
5°	1998	1990	1987	1984
10°	1997	1973	1973	1960
15°	1994	1951	1958	1931
20°	1989	1923	1940	1897
25°	1982	1885	1923	1851
30°	1975	1842	1905	1805
35°	1966	1790	1882	1752
40°	1954	1738	1863	1691
45°	1951	1680	1850	1630
50°	1948	1619	1836	1555
55°	1947	1539	1820	1478
60°	1969	1458	1827	1391
65°	2011	1361	1851	1287
70°	2072	1221	1888	1142
75°	2133	1051	1881	964
80°	2022	815	1670	715
85°	1434	428	1135	377



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**ZONAL LUMENS:**

**CANDELA DISTRIBUTION:**

Zone	Lumens	% Fixture	% Lamp		0°	90°	180°	270°	360°	Flux
0°-10°	140.4	3.3	3.3	0°	1485	1485	1485	1485	1485	
10°-20°	400.7	9.3	9.3	5°	1483	1480	1474	1476	1483	141
20°-30°	603.5	14.0	14.0	15°	1441	1419	1415	1405	1441	407
30°-40°	722.5	16.8	16.8	25°	1351	1299	1310	1276	1351	623
40°-50°	747.6	17.4	17.4	35°	1218	1128	1166	1104	1218	762
50°-60°	682.1	15.8	15.8	45°	1051	927	997	899	1051	811
60°-70°	545.3	12.7	12.7	55°	860	703	804	675	860	770
70°-80°	353.2	8.2	8.2	65°	666	474	613	448	666	658
80°-90°	108.9	2.5	2.5	75°	449	240	396	220	449	464
90°-100°	0.0	0.0	0.0	85°	119	44	94	38	119	147
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°	1144.6	26.6	26.6							
0°-40°	1867.1	43.4	43.4							
0°-60°	3296.8	76.6	76.6							
0°-90°	4304.2	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°	4304.2	100.0	100.0							



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**CANDELA DISTRIBUTION (FULL):**

	0°	30°	60°	90°	120°	150°	180°	210°	240°	270°	300°
0°	1484.9	1484.9	1484.9	1484.9	1484.9	1484.9	1484.9	1484.9	1484.9	1484.9	1484.9
5°	1482.8	1481.7	1478.6	1479.7	1476.5	1478.6	1474.5	1473.4	1475.5	1475.5	1478.6
10°	1468.2	1466.2	1456.8	1456.8	1453.7	1456.8	1450.6	1449.6	1451.6	1447.5	1456.8
15°	1441.2	1436.1	1421.5	1419.4	1413.2	1422.6	1415.3	1412.2	1412.2	1404.9	1420.5
20°	1401.8	1394.5	1368.6	1367.5	1360.3	1375.8	1367.5	1363.4	1360.3	1348.8	1367.5
25°	1350.9	1340.5	1305.2	1299.0	1292.8	1318.7	1310.4	1303.1	1292.8	1276.1	1304.2
30°	1289.6	1273.0	1230.5	1220.1	1215.9	1248.1	1244.0	1230.5	1215.9	1195.2	1226.3
35°	1218.0	1197.2	1142.2	1127.7	1129.7	1170.2	1166.1	1151.5	1130.8	1103.8	1141.2
40°	1136.0	1113.1	1048.7	1031.1	1036.3	1085.1	1083.0	1065.4	1038.4	1003.1	1048.7
45°	1050.8	1023.8	948.0	927.3	931.4	994.8	996.8	974.0	934.5	899.2	949.1
50°	958.4	925.2	843.1	819.3	825.5	895.1	903.4	874.3	830.7	787.1	840.0
55°	859.8	826.5	731.0	703.0	718.5	796.4	803.7	774.6	723.7	674.9	733.1
60°	763.2	725.8	622.0	588.8	605.4	691.5	708.2	674.9	611.6	561.8	624.1
65°	665.6	622.0	509.8	473.5	495.3	591.9	612.6	573.2	503.6	447.5	511.9
70°	562.8	521.3	402.9	353.0	388.3	494.3	513.0	475.6	394.6	330.2	406.0
75°	448.6	412.2	301.1	239.9	283.5	391.5	395.6	372.8	295.9	220.1	305.3
80°	298.0	275.2	198.3	135.0	187.9	264.8	246.1	243.0	200.4	118.4	203.5
85°	119.4	114.2	88.3	43.6	85.1	114.2	94.5	105.9	93.5	38.4	89.3
90°	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1



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**CANDELA DISTRIBUTION (continued):**

	330°	360°
0°	1484.9	1484.9
5°	1479.7	1482.8
10°	1461.0	1468.2
15°	1426.7	1441.2
20°	1381.0	1401.8
25°	1324.9	1350.9
30°	1254.3	1289.6
35°	1175.4	1218.0
40°	1091.3	1136.0
45°	999.9	1050.8
50°	899.2	958.4
55°	800.6	859.8
60°	699.9	763.2
65°	596.0	665.6
70°	496.3	562.8
75°	385.2	448.6
80°	244.0	298.0
85°	94.5	119.4
90°	2.1	2.1

(END OF REPORT)