

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: P230078

Luminaire Tested: **24CZ-LD5-40SE-S-UNV-L940-CD1-U**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P230078  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P25694)  
Test Lab: INNOVATION CENTER-P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ-LD5-40SE-S-UNV-L940-CD1-U  
Description: CRUZE 2x4 LED TROFFER  
WITH SMOOTH LENS  
Light Source: (84) 4000K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3617.0 lumens  
Efficiency: N/A  
Efficacy: 111.1 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

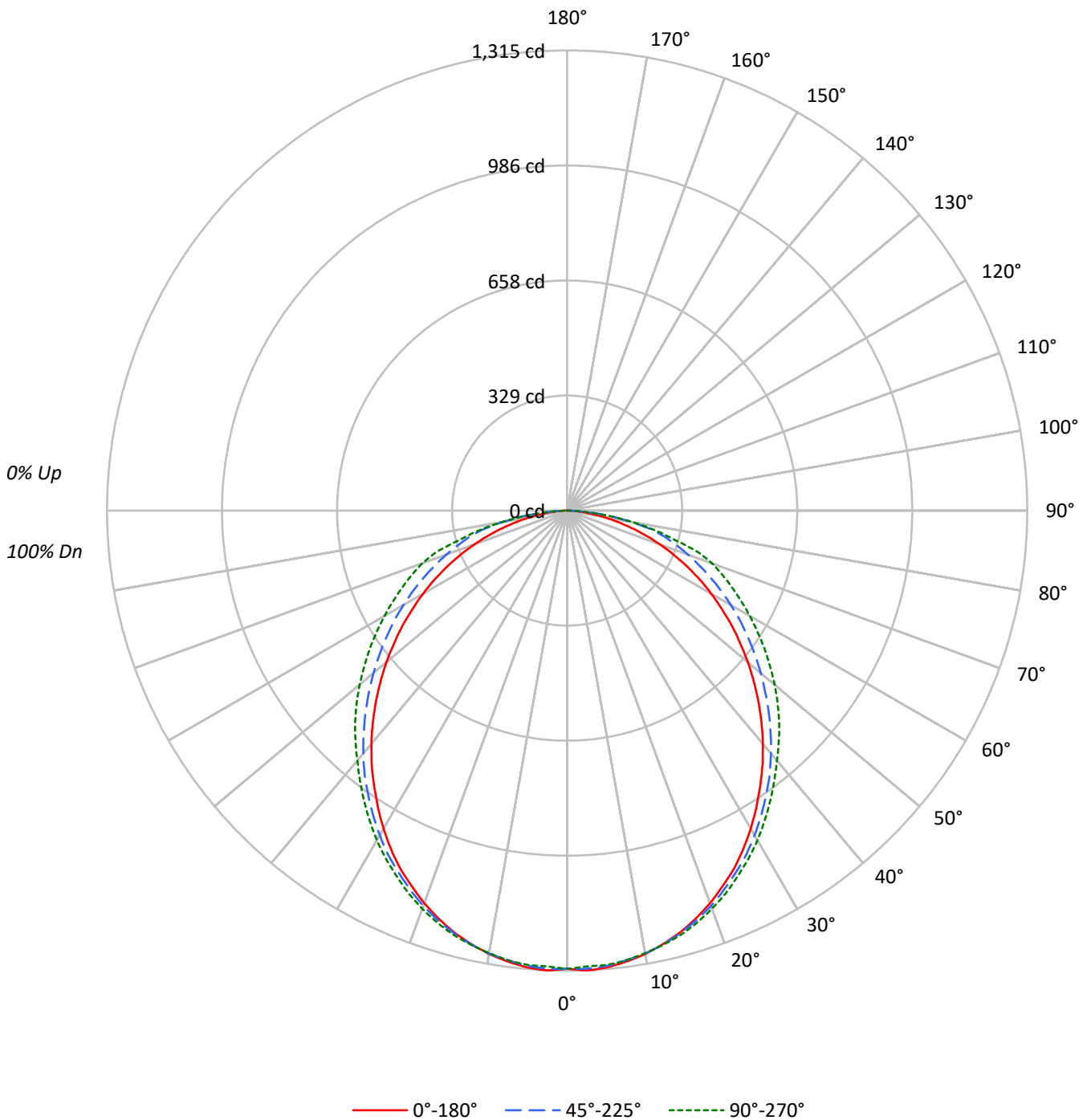
Input Watts (W): 32.55  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P230078

CATALOG NUMBER: 24CZ-LD5-40SE-S-UNV-L940-CD1-U

### Luminous Intensity Polar Plot





TEST NUMBER: P230078

CATALOG NUMBER: 24CZ-LD5-40SE-S-UNV-L940-CD1-U

**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	104	99	95	106	101	97	94	97	94	91	93	90	88	89	87	85	83
2	99	90	83	77	96	88	82	76	85	79	75	81	77	73	78	75	71	69
3	90	79	71	64	87	77	70	64	74	68	62	72	66	61	69	64	60	58
4	82	70	61	54	80	69	60	54	66	59	53	64	58	52	62	56	52	50
5	76	63	53	47	73	61	53	47	59	52	46	57	51	45	55	50	45	43
6	70	56	47	41	68	55	47	41	54	46	40	52	45	40	50	44	40	38
7	65	51	42	36	63	50	42	36	49	41	36	47	41	35	46	40	35	33
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	32	30
9	56	43	35	29	55	42	34	29	41	34	29	40	33	29	39	33	29	27
10	53	40	32	26	52	39	31	26	38	31	26	37	31	26	36	30	26	24

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	1762	1762	1762
5°	1770	1764	1760
10°	1758	1756	1754
15°	1738	1742	1749
20°	1709	1722	1734
25°	1676	1694	1712
30°	1631	1664	1690
35°	1579	1629	1663
40°	1528	1592	1638
45°	1470	1550	1631
50°	1411	1512	1620
55°	1350	1479	1615
60°	1279	1454	1623
65°	1203	1437	1655
70°	1108	1444	1733
75°	983	1495	1614
80°	821	1417	1454
85°	613	1133	1041



TEST NUMBER: P230078

CATALOG NUMBER: 24CZ-LD5-40SE-S-UNV-L940-CD1-U

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	123.8	3.4
10°-20°	352.1	9.7
20°-30°	524.7	14.5
30°-40°	617.7	17.1
40°-50°	627.7	17.4
50°-60°	564.3	15.6
60°-70°	445.8	12.3
70°-80°	282.8	7.8
80°-90°	78.1	2.2
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°	1000.6	27.7
0°-40°	1618.3	44.7
0°-60°	2810.3	77.7
0°-90°	3617.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3617.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1309	1309	1309	1309	1309	
5°	1311	1300	1306	1303	1303	124
15°	1248	1242	1250	1254	1255	352
25°	1129	1128	1141	1148	1153	519
35°	962	968	992	1002	1012	602
45°	773	784	815	839	857	596
55°	575	590	631	672	688	514
65°	378	397	451	501	520	374
75°	189	221	288	313	310	201
85°	40	69	73	67	67	49
90°	0	0	0	0	0	



TEST NUMBER: P230078

CATALOG NUMBER: 24CZ-LD5-40SE-S-UNV-L940-CD1-U

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1309.4	1309.4	1309.4	1309.4	1309.4
2.5°	1315.4	1305.8	1310.6	1308.2	1303.4
5°	1310.6	1299.8	1305.8	1303.4	1303.4
7.5°	1299.8	1291.4	1296.2	1295.0	1296.2
10°	1286.6	1278.1	1285.4	1285.4	1284.1
12.5°	1268.5	1261.3	1269.7	1269.7	1270.9
15°	1248.0	1242.0	1250.4	1254.1	1255.3
17.5°	1222.8	1216.8	1227.6	1231.2	1234.8
20°	1193.9	1191.5	1202.3	1205.9	1210.7
22.5°	1161.4	1161.4	1172.2	1177.0	1184.3
25°	1128.9	1127.7	1140.9	1148.2	1153.0
27.5°	1090.4	1091.6	1108.4	1115.7	1121.7
30°	1049.5	1051.9	1071.1	1079.5	1088.0
32.5°	1006.1	1010.9	1032.6	1042.2	1050.7
35°	961.6	967.6	991.7	1002.5	1012.2
37.5°	917.1	925.5	950.8	961.6	972.4
40°	870.1	877.4	906.2	919.5	932.7
42.5°	822.0	831.6	860.5	879.8	895.4
45°	772.7	783.5	814.8	838.8	856.9
47.5°	723.3	737.8	767.8	800.3	816.0
50°	674.0	688.4	722.1	758.2	773.9
52.5°	623.4	637.9	676.4	713.7	730.5
55°	575.3	589.7	630.6	671.6	688.4
57.5°	524.7	540.4	586.1	628.2	645.1
60°	475.4	491.0	540.4	584.9	603.0
62.5°	427.2	444.1	495.8	542.8	560.8
65°	377.9	397.2	451.3	500.7	519.9
67.5°	329.8	351.4	408.0	459.7	480.2
70°	281.6	306.9	367.1	420.0	440.5
72.5°	234.7	262.4	326.2	379.1	389.9
75°	189.0	221.4	287.6	312.9	310.5
77.5°	145.6	181.7	244.3	249.1	256.3
80°	105.9	145.6	182.9	192.6	187.7
82.5°	69.8	109.5	131.2	126.4	125.2
85°	39.7	68.6	73.4	67.4	67.4
87.5°	16.8	27.7	24.1	18.1	16.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)