

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: P230004

Luminaire Tested: **24CZ-LD5-40SE-UNV-L930-CD1-U**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P230004  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P25697)  
Test Lab: INNOVATION CENTER-P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ-LD5-40SE-UNV-L930-CD1-U  
Description: CRUZE 2x4 LED TROFFER  
WITH RIBBED LENS  
Light Source: (84) 3000K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3329.0 lumens  
Efficiency: N/A  
Efficacy: 102.3 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.25 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

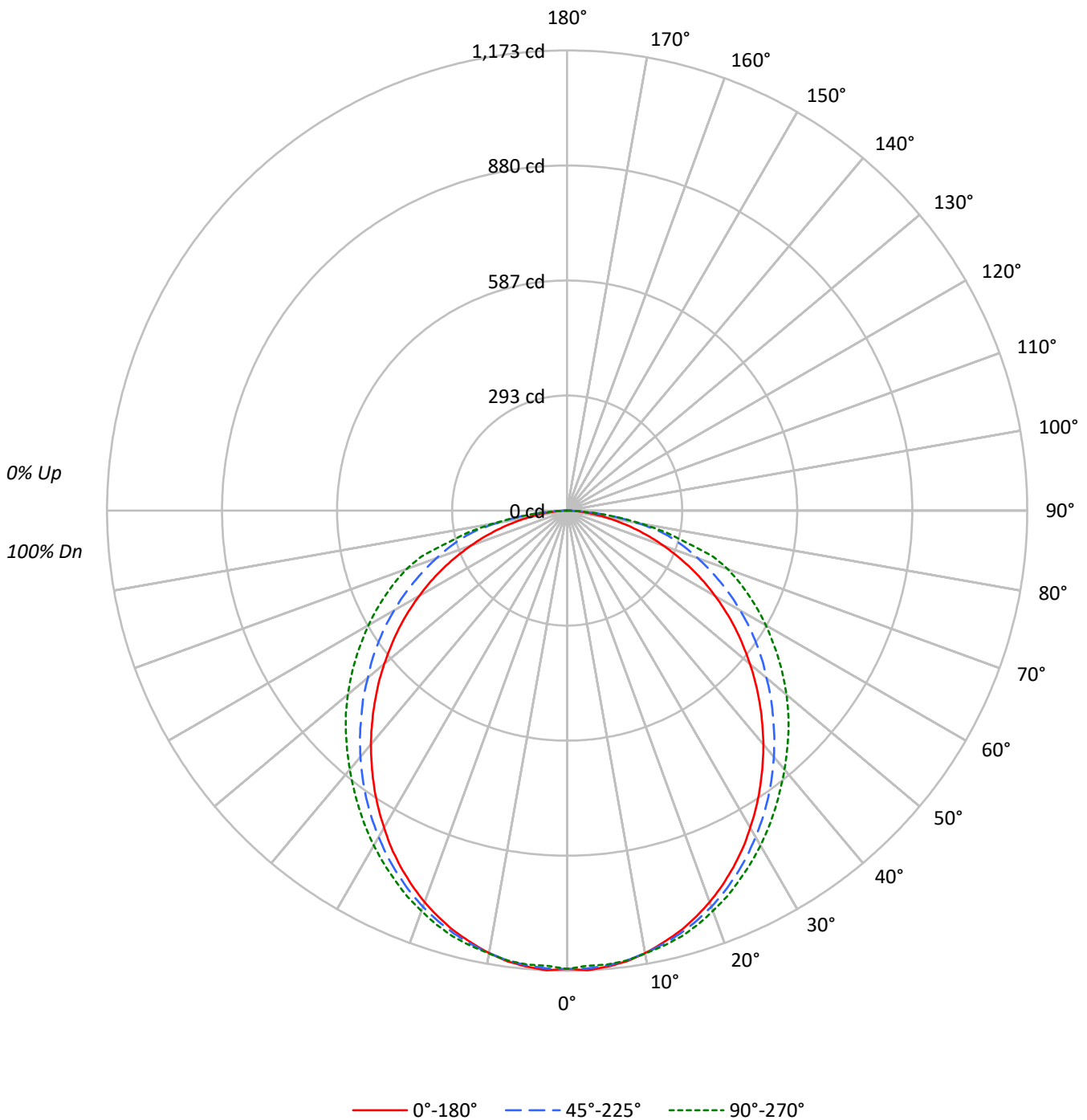
Input Watts (W): 32.55  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	106	101	97	93	97	93	90	93	90	88	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	56	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	63	50	41	35	48	41	35	47	40	35	45	39	35	32
8	60	46	38	32	58	45	37	32	44	37	31	43	36	31	42	36	31	29
9	56	42	34	28	54	42	34	28	41	33	28	40	33	28	38	32	28	26
10	52	39	31	26	51	39	31	26	38	31	26	37	30	25	36	30	25	24

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

	0°	45°	90°
0°	1572	1572	1572
5°	1576	1572	1569
10°	1565	1565	1567
15°	1546	1554	1566
20°	1521	1539	1555
25°	1489	1518	1543
30°	1450	1493	1532
35°	1410	1468	1520
40°	1367	1439	1513
45°	1321	1412	1518
50°	1274	1389	1527
55°	1227	1380	1543
60°	1172	1371	1573
65°	1110	1372	1626
70°	1027	1395	1713
75°	919	1458	1629
80°	769	1395	1492
85°	580	1073	1020



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	110.4	3.3
10°-20°	314.2	9.4
20°-30°	469.7	14.1
30°-40°	557.3	16.7
40°-50°	573.6	17.2
50°-60°	526.2	15.8
60°-70°	425.4	12.8
70°-80°	276.1	8.3
80°-90°	76.1	2.3
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°	894.4	26.9
0°-40°	1451.6	43.6
0°-60°	2551.3	76.6
0°-90°	3329.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3329.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1168	1168	1168	1168	1168	
5°	1167	1159	1164	1163	1162	111
15°	1110	1106	1116	1120	1124	313
25°	1003	1004	1022	1032	1040	462
35°	858	865	894	913	926	537
45°	694	706	742	777	798	536
55°	523	539	588	636	658	467
65°	349	369	431	488	511	345
75°	177	210	280	313	313	188
85°	38	64	70	67	66	46
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1168.3	1168.3	1168.3	1168.3	1168.3
2.5°	1172.9	1163.7	1168.3	1167.2	1161.5
5°	1167.2	1159.2	1163.7	1162.6	1161.5
7.5°	1159.2	1151.2	1156.9	1155.8	1156.9
10°	1145.5	1138.7	1145.5	1146.6	1146.6
12.5°	1128.4	1122.7	1131.8	1134.1	1136.4
15°	1110.2	1105.6	1115.9	1120.4	1123.9
17.5°	1087.4	1084.0	1096.5	1102.2	1106.8
20°	1062.3	1061.2	1074.8	1080.5	1086.2
22.5°	1033.8	1033.8	1049.8	1056.6	1064.6
25°	1003.0	1004.2	1022.4	1031.5	1039.5
27.5°	970.0	971.1	992.8	1004.2	1013.3
30°	933.5	938.1	960.9	975.7	985.9
32.5°	897.0	902.7	927.8	944.9	956.3
35°	858.3	865.1	893.6	913.0	925.5
37.5°	818.4	826.4	857.1	878.8	893.6
40°	778.5	787.6	819.5	844.6	861.7
42.5°	736.3	746.6	781.9	811.5	829.8
45°	694.1	705.5	742.0	777.4	797.9
47.5°	652.0	665.6	704.4	743.2	764.8
50°	608.7	622.3	663.4	707.8	729.5
52.5°	565.3	581.3	626.9	672.5	694.1
55°	523.2	539.1	588.1	636.0	657.7
57.5°	479.9	495.8	549.4	599.5	621.2
60°	435.4	453.6	509.5	560.8	584.7
62.5°	392.1	411.5	470.7	525.5	548.2
65°	348.8	369.3	430.8	487.8	510.6
67.5°	304.3	328.3	392.1	450.2	474.2
70°	261.0	287.2	354.5	412.6	435.4
72.5°	218.8	247.3	316.9	376.1	389.8
75°	176.7	209.7	280.4	313.4	313.4
77.5°	136.8	173.3	239.4	251.9	258.7
80°	99.2	139.1	180.1	194.9	192.6
82.5°	66.1	106.0	128.8	128.8	125.4
85°	37.6	63.8	69.5	67.2	66.1
87.5°	16.0	23.9	21.7	17.1	14.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)