

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: P388608

Luminaire Tested: **24CZ2-40-SQR-UNV-L930-CD1-SDWPD1-U**

Issue Date: 2/28/2020

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.

**Test Information**

Test Method: LM-79-08  
Report Number: P388608  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2002-678-2)  
Test Lab: INNOVATION CENTER (G2)  
Issue Date: 2/28/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ2-40-SQR-UNV-L930-CD1-SDWPD1-U  
Description: 2x4 CRUZE LED TROFFER WITH 3000K, 90 LEDS, AND SQUARE LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3244.0 lumens  
Efficiency: N/A  
Efficacy: 89.6 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.33 / 1.41  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

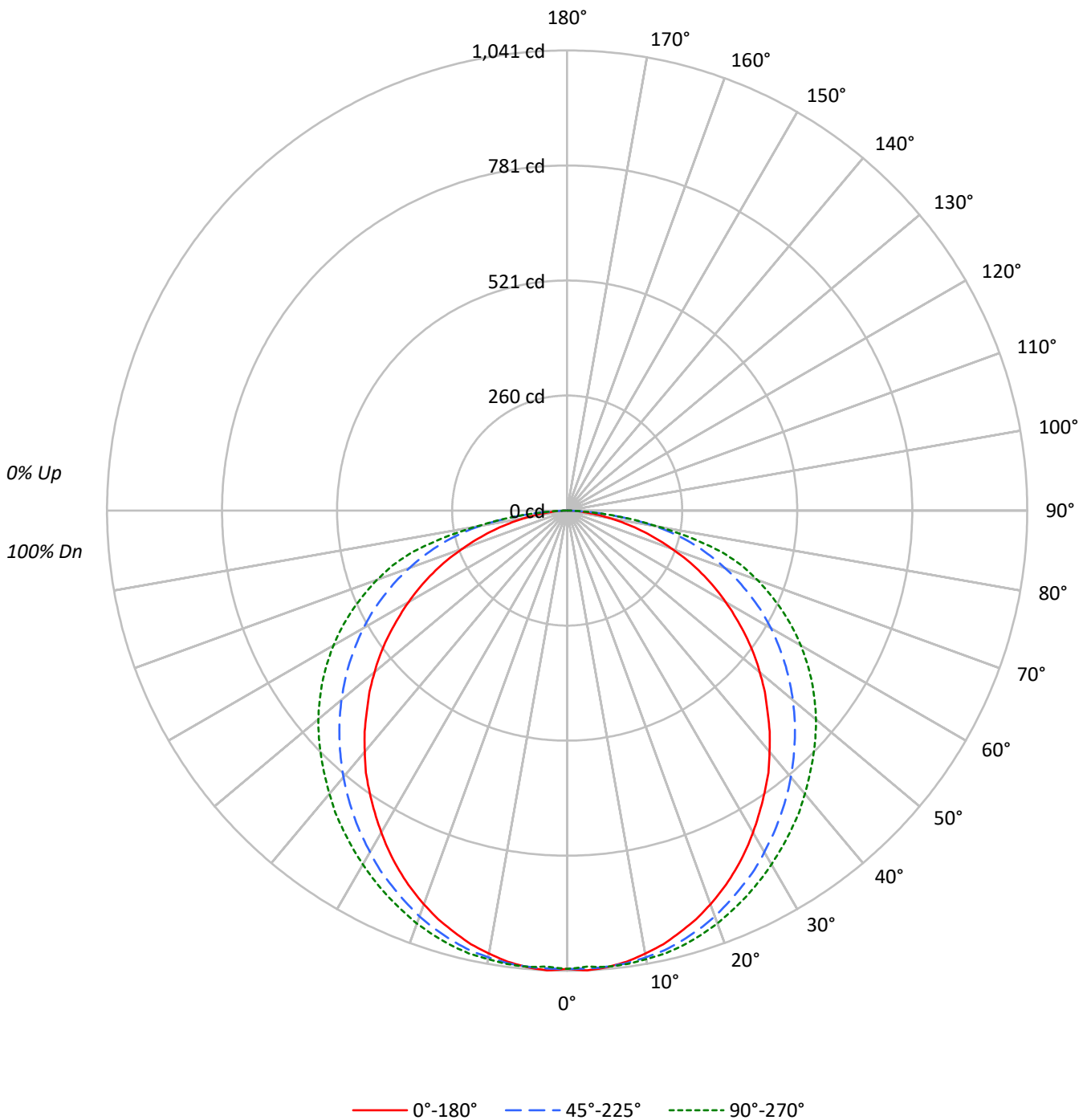
Input Watts (W): 36.2  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	98	94	105	100	96	92	96	93	89	92	89	87	89	86	84	82
2	98	89	81	75	95	87	80	74	83	78	73	80	75	71	77	73	69	67
3	89	77	69	62	86	76	68	61	73	66	60	70	64	59	67	62	58	56
4	81	68	59	52	78	67	58	52	64	57	51	62	55	50	60	54	49	47
5	74	61	51	44	72	60	51	44	57	50	44	55	49	43	54	48	43	41
6	68	55	45	39	66	54	45	38	52	44	38	50	43	38	48	42	37	35
7	63	49	40	34	62	49	40	34	47	39	34	45	39	33	44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30	42	35	30	40	34	30	28
9	55	41	33	27	54	41	33	27	39	32	27	38	32	27	37	31	27	25
10	52	38	30	25	50	37	30	24	36	29	24	36	29	24	35	29	24	22

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

	0°	45°	90°
0°	1395	1395	1395
5°	1400	1399	1399
10°	1390	1402	1408
15°	1376	1403	1418
20°	1357	1399	1423
25°	1334	1391	1428
30°	1306	1386	1436
35°	1279	1383	1450
40°	1251	1383	1469
45°	1219	1386	1498
50°	1191	1395	1538
55°	1156	1410	1586
60°	1116	1433	1643
65°	1067	1460	1712
70°	990	1496	1799
75°	897	1548	1882
80°	755	1552	1619
85°	579	1175	1175



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	98.4	3.0
10°-20°	283.2	8.7
20°-30°	430.2	13.3
30°-40°	523.2	16.1
40°-50°	557.0	17.2
50°-60°	530.6	16.4
60°-70°	443.7	13.7
70°-80°	295.8	9.1
80°-90°	81.9	2.5
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°	811.8	25.0
0°-40°	1335.0	41.2
0°-60°	2422.6	74.7
0°-90°	3244.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3244.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1037	1037	1037	1037	1037	
5°	1037	1030	1036	1036	1036	98
15°	988	990	1007	1014	1018	279
25°	899	910	937	953	962	414
35°	779	801	842	870	883	487
45°	641	675	728	769	787	495
55°	493	536	601	653	676	441
65°	335	385	458	515	538	331
75°	172	227	298	348	362	183
85°	38	70	76	75	76	45
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1036.9	1036.9	1036.9	1036.9	1036.9
2.5°	1041.2	1033.7	1036.9	1036.9	1032.7
5°	1036.9	1030.5	1035.9	1035.9	1035.9
7.5°	1029.4	1024.1	1032.7	1034.8	1034.8
10°	1017.7	1015.5	1026.2	1029.4	1030.5
12.5°	1004.8	1003.7	1018.7	1023.0	1026.2
15°	987.7	989.8	1006.9	1014.4	1017.7
17.5°	969.5	973.7	993.0	1003.7	1006.9
20°	948.0	954.5	977.0	987.7	994.1
22.5°	924.5	934.1	957.7	970.5	978.0
25°	898.8	910.5	937.3	953.4	962.0
27.5°	870.9	885.9	917.0	935.2	943.7
30°	840.9	858.0	892.3	913.8	924.5
32.5°	809.8	830.2	867.7	891.3	904.1
35°	778.8	801.3	842.0	869.8	882.7
37.5°	747.7	770.2	815.2	845.2	861.3
40°	712.4	739.1	787.3	820.6	836.6
42.5°	678.1	707.0	758.4	794.8	812.0
45°	640.6	674.9	728.4	769.1	787.3
47.5°	606.3	640.6	698.4	741.3	761.6
50°	568.8	605.2	666.3	713.4	734.9
52.5°	532.4	569.9	634.2	684.5	705.9
55°	492.8	535.6	601.0	653.4	675.9
57.5°	453.1	499.2	566.7	621.3	643.8
60°	414.6	461.7	532.4	587.0	610.6
62.5°	376.0	423.1	497.0	552.7	575.2
65°	335.3	384.6	458.5	515.3	537.8
67.5°	294.6	346.0	419.9	476.7	498.1
70°	251.7	306.4	380.3	436.0	457.4
72.5°	212.1	266.7	339.6	394.2	414.6
75°	172.5	227.1	297.8	348.1	362.1
77.5°	133.9	188.5	251.7	284.9	288.2
80°	97.5	148.9	200.3	210.0	208.9
82.5°	65.3	111.4	138.2	139.3	142.5
85°	37.5	69.6	76.1	75.0	76.1
87.5°	15.0	24.6	21.4	16.1	16.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)