

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: P389734

Luminaire Tested: **24CZ2-40VHE-S-UNV-L930-CD1-SWPD1-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: P389734  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-1)  
Test Lab: INNOVATIONS CENTER(G3)  
Issue Date: 2/28/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ2-40VHE-S-UNV-L930-CD1-SWPD1-U  
Description: 2x4 CRUZE LED TROFFER WITH 3000K, 90 LEDS, AND SMOOTH LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3460.7 lumens  
Efficiency: N/A  
Efficacy: 132.1 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

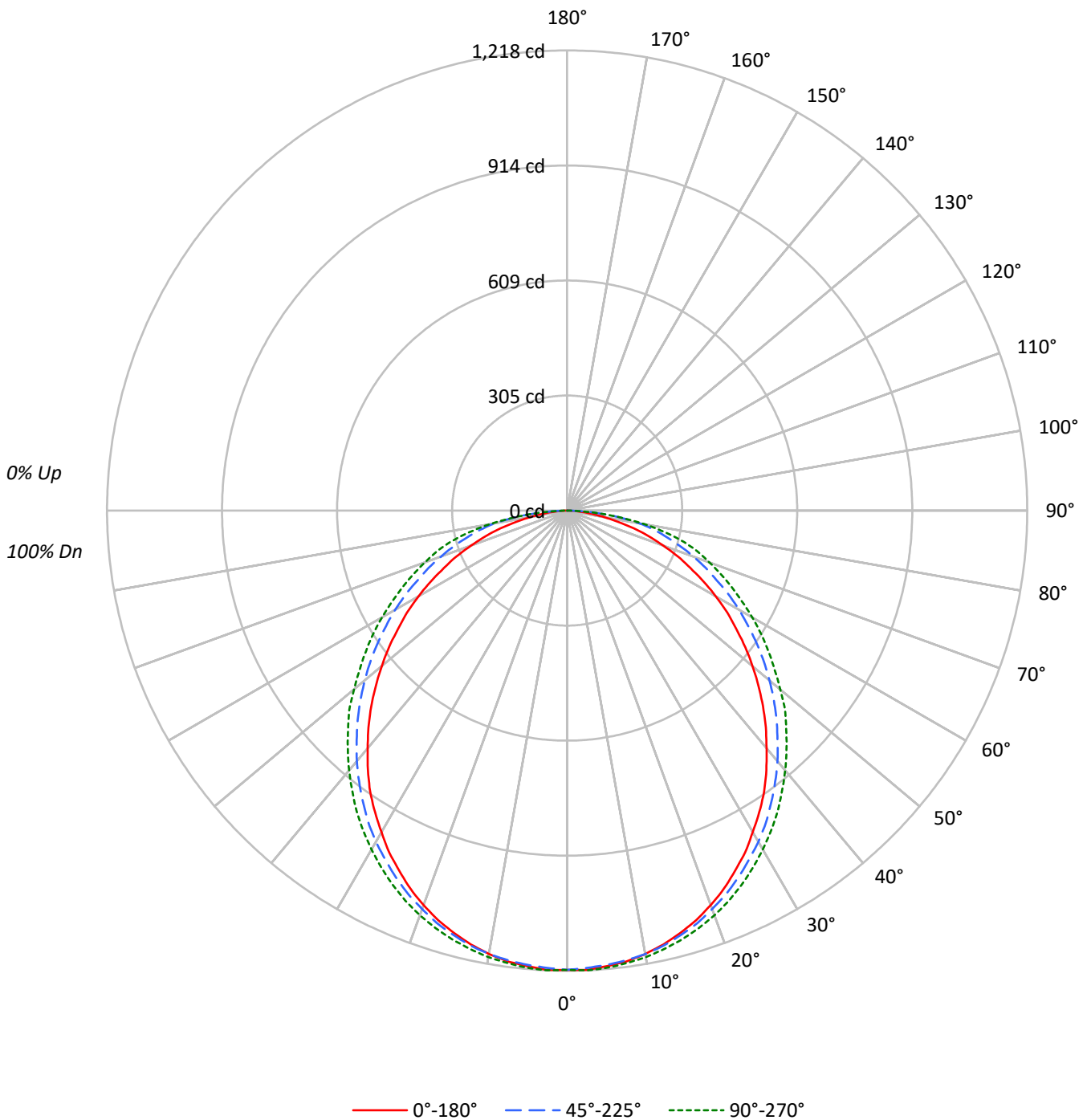
Input Watts (W): 26.2  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	99	95	106	101	97	93	97	93	90	93	90	88	89	87	85	83
2	98	90	83	77	96	88	81	76	84	79	74	81	76	72	78	74	71	69
3	89	79	70	64	87	77	69	63	74	67	62	71	66	61	69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53	63	57	52	61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42
6	70	56	47	40	68	55	47	40	53	46	40	52	45	40	50	44	39	37
7	64	51	42	36	63	50	42	36	48	41	35	47	40	35	46	39	35	33
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29
9	56	43	34	29	55	42	34	29	41	34	28	40	33	28	39	33	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24

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

	0°	45°	90°
0°	1636	1636	1636
5°	1635	1630	1641
10°	1628	1628	1640
15°	1612	1620	1637
20°	1591	1607	1632
25°	1562	1591	1622
30°	1527	1573	1609
35°	1493	1547	1596
40°	1442	1521	1577
45°	1395	1491	1560
50°	1342	1463	1542
55°	1282	1436	1527
60°	1222	1414	1523
65°	1145	1389	1533
70°	1059	1397	1574
75°	949	1423	1663
80°	766	1508	1627
85°	577	1323	1289



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	115.1	3.3
10°-20°	328.9	9.5
20°-30°	494.4	14.3
30°-40°	588.9	17.0
40°-50°	602.7	17.4
50°-60°	542.6	15.7
60°-70°	426.1	12.3
70°-80°	276.6	8.0
80°-90°	85.5	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°	938.3	27.1
0°-40°	1527.2	44.1
0°-60°	2672.5	77.2
0°-90°	3460.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3460.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1216	1216	1216	1216	1216	
5°	1210	1212	1207	1214	1215	115
15°	1158	1161	1163	1173	1175	326
25°	1052	1061	1072	1089	1093	485
35°	909	920	942	965	972	567
45°	733	751	784	813	820	565
55°	546	570	612	644	651	490
65°	360	387	436	473	482	358
75°	182	218	274	311	320	193
85°	37	69	86	84	84	45
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1215.8	1215.8	1215.8	1215.8	1215.8
2.5°	1216.9	1216.9	1211.4	1216.9	1218.0
5°	1210.3	1212.5	1207.0	1213.6	1214.7
7.5°	1203.7	1203.7	1200.4	1207.0	1208.1
10°	1191.6	1192.7	1191.6	1199.3	1200.4
12.5°	1176.2	1178.4	1179.5	1187.2	1188.3
15°	1157.5	1160.8	1163.0	1172.9	1175.1
17.5°	1136.6	1139.9	1145.4	1156.4	1158.6
20°	1111.3	1115.7	1122.3	1136.6	1139.9
22.5°	1083.9	1088.3	1099.2	1112.4	1117.9
25°	1052.0	1060.8	1071.8	1089.4	1092.7
27.5°	1020.1	1027.8	1042.1	1060.8	1065.2
30°	982.7	994.8	1012.4	1031.1	1035.5
32.5°	946.5	958.5	979.4	999.2	1004.7
35°	909.1	920.1	942.1	965.1	971.7
37.5°	866.2	880.5	904.7	927.8	934.4
40°	821.1	838.7	866.2	890.4	898.1
42.5°	778.3	797.0	824.4	850.8	859.6
45°	733.2	750.8	783.8	813.4	820.0
47.5°	687.0	706.8	742.0	771.7	782.7
50°	640.9	661.7	699.1	729.9	736.5
52.5°	594.7	616.7	656.3	689.2	692.5
55°	546.3	570.5	612.3	644.2	650.8
57.5°	502.4	523.2	568.3	601.3	609.0
60°	454.0	477.1	525.4	556.2	566.1
62.5°	407.8	432.0	482.6	513.3	522.1
65°	359.5	386.9	436.4	472.7	481.5
67.5°	317.7	344.1	396.8	432.0	440.8
70°	269.3	299.0	355.1	391.3	400.1
72.5°	227.5	258.3	314.4	349.6	362.8
75°	182.5	217.7	273.7	311.1	319.9
77.5°	138.5	179.2	236.3	264.9	264.9
80°	98.9	141.8	194.6	207.8	210.0
82.5°	64.9	106.6	144.0	142.9	142.9
85°	37.4	69.3	85.7	83.5	83.5
87.5°	14.3	28.6	30.8	30.8	29.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)