

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: P388847

Luminaire Tested: **24CZ2-50VHE-UNV-L930-CD1-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: P388847  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-5)  
Test Lab: INNOVATIONS CENTER(G3)  
Issue Date: 2/28/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ2-50VHE-UNV-L930-CD1-U  
Description: 2x4 CRUZE LED TROFFER WITH 3000K, 90 LEDS, AND RIBBED LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

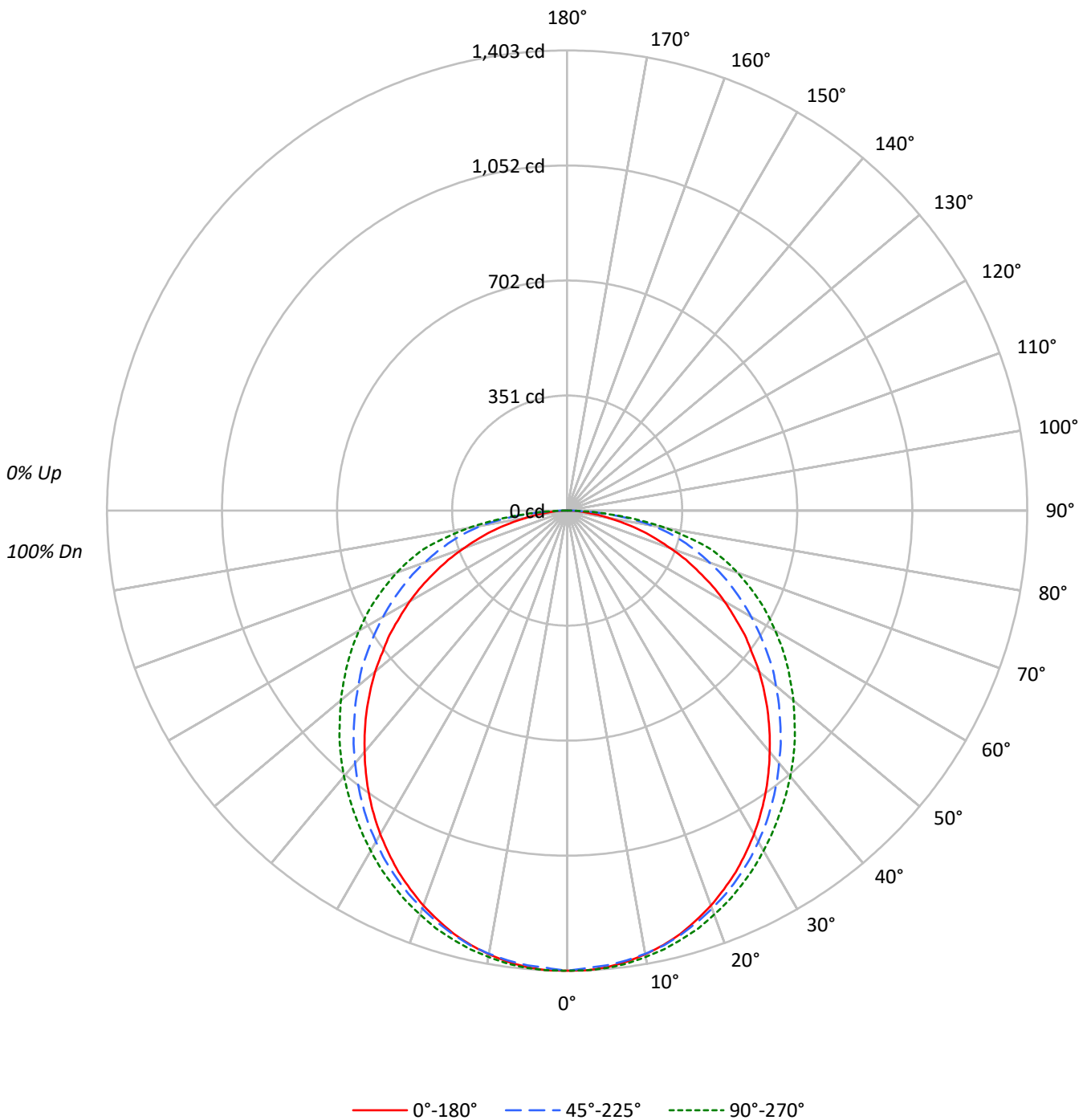
Lumens per Lamp: N/A  
Luminaire Lumens: 4178.2 lumens  
Efficiency: N/A  
Efficacy: 127.8 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.27 / 1.37  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 32.7  
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	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	58	56
4	81	69	59	52	79	67	59	52	65	57	51	62	56	51	60	55	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	39	50	44	38	49	43	38	36
7	64	50	41	35	62	49	40	34	47	40	34	46	39	34	45	38	34	32
8	59	45	37	31	58	45	36	31	43	36	30	42	35	30	41	35	30	28
9	55	42	33	28	54	41	33	28	40	33	27	39	32	27	38	32	27	25
10	52	38	30	25	51	38	30	25	37	30	25	36	29	25	35	29	25	23

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

	0°	45°	90°
0°	1887	1887	1887
5°	1887	1880	1891
10°	1877	1875	1888
15°	1861	1865	1884
20°	1835	1849	1877
25°	1805	1832	1869
30°	1770	1811	1861
35°	1732	1789	1855
40°	1688	1766	1859
45°	1645	1748	1868
50°	1600	1740	1886
55°	1551	1737	1920
60°	1490	1745	1970
65°	1412	1771	2055
70°	1311	1816	2172
75°	1196	1906	2356
80°	983	2053	2356
85°	753	1894	2024



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	132.7	3.2
10°-20°	378.8	9.1
20°-30°	570.0	13.6
30°-40°	683.1	16.3
40°-50°	711.8	17.0
50°-60°	662.3	15.9
60°-70°	545.5	13.1
70°-80°	371.5	8.9
80°-90°	122.6	2.9
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°	1081.4	25.9
0°-40°	1764.5	42.2
0°-60°	3138.6	75.1
0°-90°	4178.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4178.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1403	1403	1403	1403	1403	
5°	1397	1397	1392	1399	1400	133
15°	1336	1337	1339	1351	1353	376
25°	1216	1222	1234	1255	1259	560
35°	1054	1067	1089	1118	1130	659
45°	865	883	919	965	982	667
55°	661	683	740	799	818	589
65°	443	481	556	622	646	440
75°	230	282	367	432	453	243
85°	49	95	123	131	131	60
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1402.8	1402.8	1402.8	1402.8	1402.8
2.5°	1402.8	1402.8	1395.8	1402.8	1402.8
5°	1397.2	1397.2	1391.7	1398.6	1400.0
7.5°	1387.5	1388.9	1383.3	1391.7	1393.1
10°	1373.5	1374.9	1372.1	1380.5	1381.9
12.5°	1356.8	1358.2	1358.2	1368.0	1369.3
15°	1335.9	1337.3	1338.7	1351.2	1352.6
17.5°	1309.4	1313.6	1316.4	1331.7	1334.5
20°	1281.5	1285.7	1291.3	1308.0	1310.8
22.5°	1249.4	1255.0	1264.8	1282.9	1287.1
25°	1216.0	1221.5	1234.1	1255.0	1259.2
27.5°	1178.3	1186.7	1202.0	1224.3	1229.9
30°	1139.3	1147.6	1165.8	1189.5	1197.8
32.5°	1097.4	1108.6	1129.5	1156.0	1164.4
35°	1054.2	1066.8	1089.1	1118.3	1129.5
37.5°	1008.2	1022.1	1048.6	1080.7	1094.6
40°	960.8	977.5	1005.4	1043.0	1058.4
42.5°	913.4	928.7	963.6	1004.0	1020.7
45°	864.6	882.7	918.9	965.0	981.7
47.5°	814.4	832.5	875.7	924.5	939.9
50°	764.2	782.3	831.1	882.7	900.8
52.5°	709.8	733.5	789.3	840.9	859.0
55°	661.0	683.3	740.5	799.0	818.5
57.5°	605.2	631.7	694.4	755.8	776.7
60°	553.6	581.5	648.4	711.2	732.1
62.5°	500.6	531.3	602.4	666.5	690.3
65°	443.4	481.1	556.4	621.9	645.6
67.5°	391.8	430.9	510.4	577.3	598.2
70°	333.3	380.7	461.6	528.5	552.2
72.5°	283.1	330.5	415.5	481.1	504.8
75°	230.1	281.7	366.7	432.3	453.2
77.5°	177.1	234.3	319.3	369.5	376.5
80°	126.9	186.9	264.9	294.2	304.0
82.5°	89.2	143.6	195.2	214.7	220.3
85°	48.8	94.8	122.7	131.1	131.1
87.5°	20.9	40.4	48.8	50.2	51.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)