

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: P388691

Luminaire Tested: **24CZ2-45-SQR-UNV-L950-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: P388691  
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: 24CZ2-45-SQR-UNV-L950-CD1-U  
Description: 2x4 CRUZE LED TROFFER WITH 5000K, 90 LEDS, AND SQUARE LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

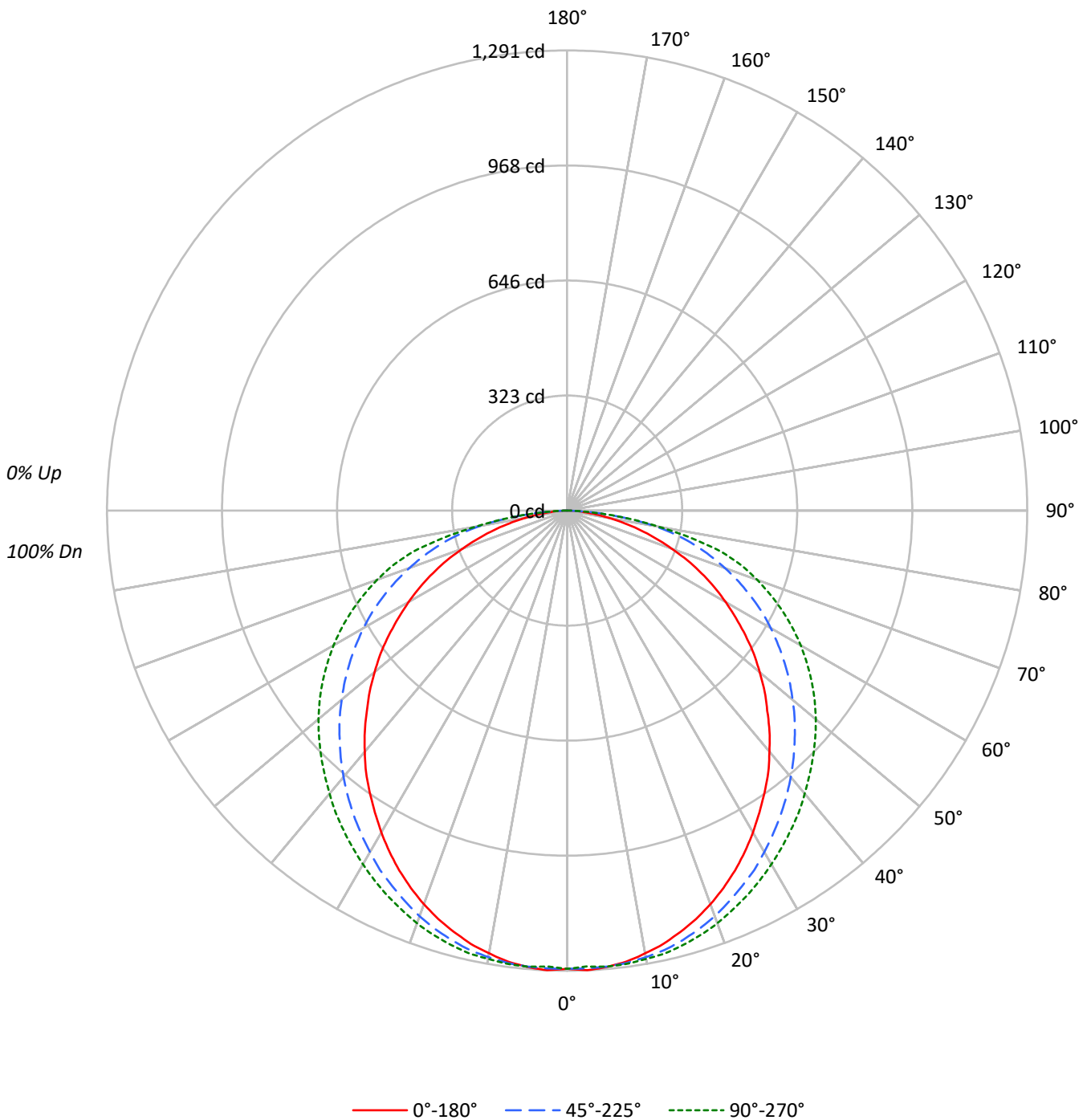
Lumens per Lamp: N/A  
Luminaire Lumens: 4021.3 lumens  
Efficiency: N/A  
Efficacy: 93.7 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.33 / 1.41  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 42.9  
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°	1729	1729	1729
5°	1736	1734	1734
10°	1724	1738	1745
15°	1705	1739	1757
20°	1683	1734	1764
25°	1654	1725	1770
30°	1620	1718	1780
35°	1586	1714	1797
40°	1551	1714	1822
45°	1511	1718	1857
50°	1476	1729	1907
55°	1433	1747	1966
60°	1383	1776	2037
65°	1323	1809	2122
70°	1228	1854	2231
75°	1111	1919	2333
80°	936	1924	2006
85°	718	1456	1456



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	122.0	3.0
10°-20°	351.0	8.7
20°-30°	533.2	13.3
30°-40°	648.6	16.1
40°-50°	690.5	17.2
50°-60°	657.7	16.4
60°-70°	550.0	13.7
70°-80°	366.7	9.1
80°-90°	101.5	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°	1006.3	25.0
0°-40°	1654.9	41.2
0°-60°	3003.1	74.7
0°-90°	4021.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4021.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1285	1285	1285	1285	1285	
5°	1285	1277	1284	1284	1284	122
15°	1224	1227	1248	1258	1262	345
25°	1114	1129	1162	1182	1192	513
35°	965	993	1044	1078	1094	604
45°	794	837	903	953	976	614
55°	611	664	745	810	838	546
65°	416	477	568	639	667	411
75°	214	282	369	432	449	226
85°	46	86	94	93	94	56
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1285.4	1285.4	1285.4	1285.4	1285.4
2.5°	1290.7	1281.4	1285.4	1285.4	1280.1
5°	1285.4	1277.4	1284.1	1284.1	1284.1
7.5°	1276.1	1269.5	1280.1	1282.7	1282.7
10°	1261.5	1258.8	1272.1	1276.1	1277.4
12.5°	1245.6	1244.2	1262.8	1268.1	1272.1
15°	1224.3	1227.0	1248.2	1257.5	1261.5
17.5°	1201.7	1207.1	1231.0	1244.2	1248.2
20°	1175.2	1183.2	1211.0	1224.3	1232.3
22.5°	1146.0	1157.9	1187.1	1203.1	1212.4
25°	1114.1	1128.7	1161.9	1181.8	1192.5
27.5°	1079.6	1098.2	1136.7	1159.3	1169.9
30°	1042.4	1063.6	1106.1	1132.7	1146.0
32.5°	1003.9	1029.1	1075.6	1104.8	1120.7
35°	965.4	993.3	1043.7	1078.3	1094.2
37.5°	926.9	954.8	1010.5	1047.7	1067.6
40°	883.1	916.2	976.0	1017.2	1037.1
42.5°	840.6	876.4	940.2	985.3	1006.5
45°	794.1	836.6	903.0	953.4	976.0
47.5°	751.6	794.1	865.8	918.9	944.1
50°	705.1	750.3	826.0	884.4	910.9
52.5°	660.0	706.4	786.1	848.5	875.1
55°	610.8	663.9	744.9	810.0	837.9
57.5°	561.7	618.8	702.5	770.2	798.1
60°	513.9	572.3	660.0	727.7	756.9
62.5°	466.1	524.5	616.1	685.2	713.1
65°	415.6	476.7	568.3	638.7	666.6
67.5°	365.2	428.9	520.5	590.9	617.5
70°	312.1	379.8	471.4	540.5	567.0
72.5°	262.9	330.6	420.9	488.7	513.9
75°	213.8	281.5	369.2	431.6	448.8
77.5°	166.0	233.7	312.1	353.2	357.2
80°	120.8	184.6	248.3	260.3	258.9
82.5°	81.0	138.1	171.3	172.6	176.6
85°	46.5	86.3	94.3	93.0	94.3
87.5°	18.6	30.5	26.6	19.9	19.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)