

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: P388397

Luminaire Tested: **22CZ2-60VHE-UNV-L940-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: P388397  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-27)  
Test Lab: INNOVATIONS CENTER(G3)  
Issue Date: 2/28/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 22CZ2-60VHE-UNV-L940-CD1-U  
Description: 2x2 CRUZE LED TROFFER WITH 4000K, 90 LEDS, AND RIBBED LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

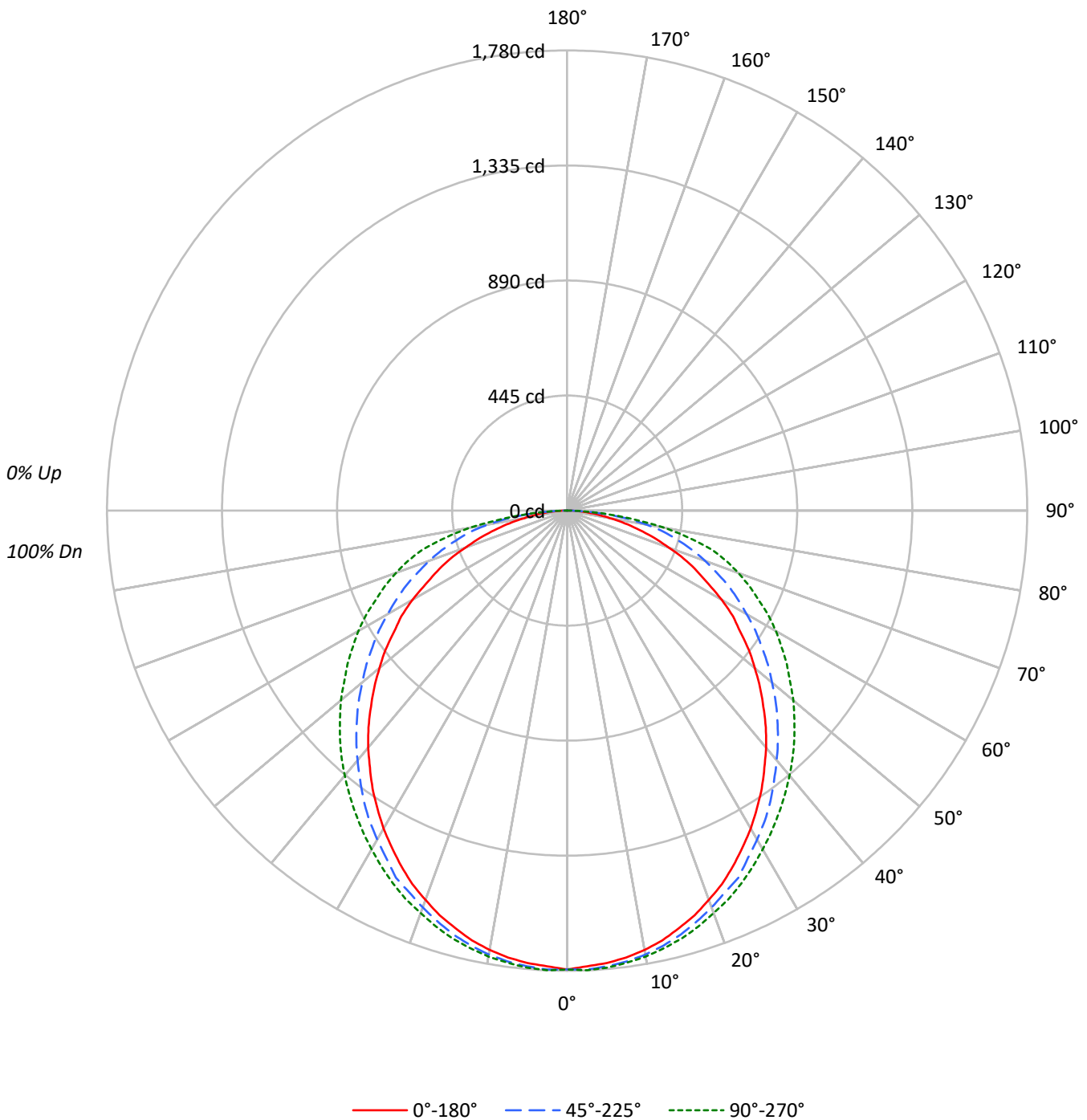
Lumens per Lamp: N/A  
Luminaire Lumens: 5219.3 lumens  
Efficiency: N/A  
Efficacy: 118.4 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.27 / 1.36  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

Input Watts (W): 44.1  
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	101	96	93	96	93	90		92	90	87		89	86	84	82
2	98	89	82	76	95	87	81	75	84	78	73		80	76	71		77	73	70	68
3	89	78	69	63	86	76	68	62	73	66	61		70	65	60		68	63	59	56
4	81	69	60	53	79	67	59	52	65	57	52		63	56	51		60	55	50	48
5	75	61	52	45	72	60	52	45	58	50	44		56	49	44		54	48	44	41
6	69	55	46	39	67	54	46	39	52	45	39		51	44	39		49	43	38	36
7	64	50	41	35	62	49	41	35	48	40	34		46	39	34		45	39	34	32
8	59	46	37	31	58	45	37	31	44	36	31		42	35	30		41	35	30	28
9	56	42	34	28	54	41	33	28	40	33	28		39	32	27		38	32	27	25
10	52	39	31	25	51	38	30	25	37	30	25		36	30	25		35	29	25	23

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

	0°	45°	90°
0°	4776	4776	4776
5°	4745	4780	4794
10°	4716	4765	4786
15°	4658	4729	4772
20°	4589	4678	4744
25°	4507	4651	4728
30°	4413	4565	4700
35°	4311	4505	4691
40°	4204	4430	4701
45°	4085	4379	4730
50°	3967	4333	4785
55°	3832	4313	4868
60°	3718	4313	5018
65°	3532	4383	5200
70°	3294	4466	5537
75°	3017	4619	5981
80°	2627	4816	5890
85°	2300	4282	4678



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	167.8	3.2
10°-20°	478.0	9.2
20°-30°	717.6	13.7
30°-40°	857.5	16.4
40°-50°	891.7	17.1
50°-60°	826.5	15.8
60°-70°	677.9	13.0
70°-80°	458.3	8.8
80°-90°	144.0	2.8
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°	1363.5	26.1
0°-40°	2221.0	42.6
0°-60°	3939.2	75.5
0°-90°	5219.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5219.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1775	1775	1775	1775	1775	
5°	1757	1759	1770	1772	1775	167
15°	1672	1680	1698	1708	1713	472
25°	1518	1531	1567	1585	1592	699
35°	1312	1330	1371	1412	1428	820
45°	1074	1094	1151	1217	1243	829
55°	817	842	919	1002	1038	734
65°	555	586	688	778	817	548
75°	290	339	444	534	575	308
85°	74	103	139	154	152	85
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1774.7	1774.7	1774.7	1774.7	1774.7
2.5°	1764.4	1769.5	1777.2	1779.8	1779.8
5°	1756.7	1759.2	1769.5	1772.1	1774.7
7.5°	1743.8	1749.0	1759.2	1761.8	1764.4
10°	1725.9	1731.0	1743.8	1749.0	1751.5
12.5°	1702.7	1707.9	1723.3	1731.0	1733.6
15°	1671.9	1679.6	1697.6	1707.9	1713.0
17.5°	1641.1	1648.8	1666.8	1682.2	1687.3
20°	1602.6	1620.6	1633.4	1654.0	1656.5
22.5°	1564.1	1574.3	1597.4	1618.0	1628.3
25°	1517.8	1530.7	1566.6	1584.6	1592.3
27.5°	1469.0	1487.0	1515.3	1543.5	1553.8
30°	1420.2	1433.1	1469.0	1502.4	1512.7
32.5°	1366.3	1384.3	1422.8	1456.2	1471.6
35°	1312.4	1330.4	1371.4	1412.5	1427.9
37.5°	1253.3	1273.9	1314.9	1363.7	1384.3
40°	1196.8	1212.2	1261.0	1320.1	1338.1
42.5°	1137.7	1155.7	1207.1	1271.3	1291.8
45°	1073.5	1094.1	1150.6	1217.3	1243.0
47.5°	1011.9	1032.4	1094.1	1160.8	1191.7
50°	947.7	973.4	1035.0	1112.1	1142.9
52.5°	886.0	909.2	978.5	1058.1	1086.4
55°	816.7	842.4	919.4	1001.6	1037.6
57.5°	760.2	778.2	862.9	947.7	983.6
60°	690.9	714.0	801.3	891.2	932.3
62.5°	616.4	654.9	744.8	837.2	878.3
65°	554.7	585.6	688.3	778.2	816.7
67.5°	490.5	523.9	624.1	719.1	762.8
70°	418.6	462.3	567.6	662.6	703.7
72.5°	354.4	400.6	508.5	601.0	644.6
75°	290.2	339.0	444.3	534.2	575.3
77.5°	228.6	282.5	385.2	454.6	480.3
80°	169.5	220.9	310.8	359.6	380.1
82.5°	118.1	161.8	228.6	254.3	259.4
85°	74.5	102.7	138.7	154.1	151.5
87.5°	33.4	41.1	51.4	56.5	53.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)