

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: P388831

Luminaire Tested: **24CZ2-45VHE-UNV-L950-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: P388831  
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: 24CZ2-45VHE-UNV-L950-CD1-SWPD1-U  
Description: 2x4 CRUZE LED TROFFER WITH 5000K, 90 LEDS, AND RIBBED LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4082.4 lumens  
Efficiency: N/A  
Efficacy: 137.9 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

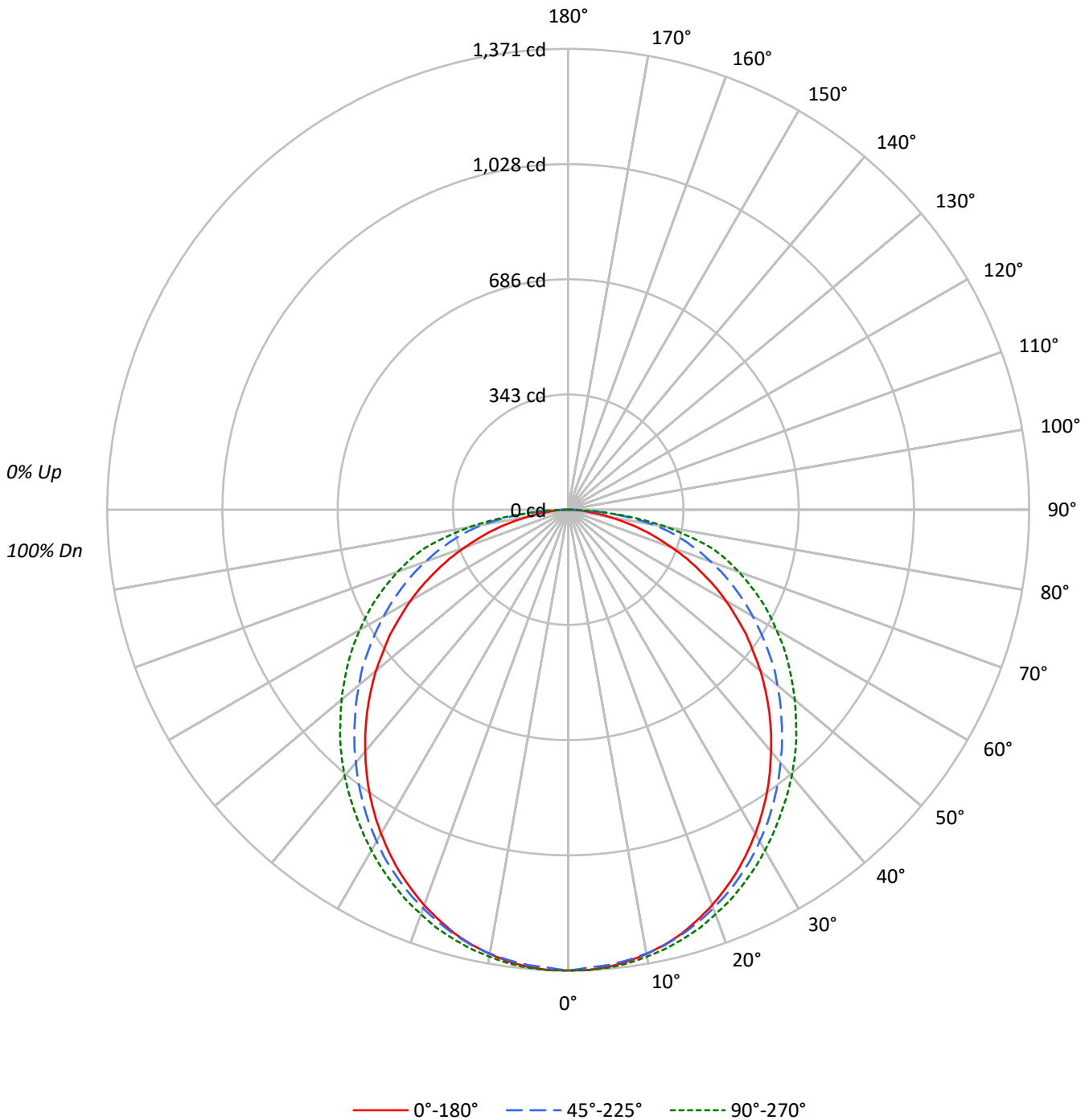
Input Watts (W): 29.6  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	1844	1844	1844
5°	1844	1837	1848
10°	1834	1832	1845
15°	1818	1822	1841
20°	1793	1807	1834
25°	1764	1790	1826
30°	1729	1770	1818
35°	1692	1748	1813
40°	1649	1725	1816
45°	1607	1709	1825
50°	1563	1700	1842
55°	1515	1697	1876
60°	1456	1705	1925
65°	1379	1731	2008
70°	1281	1774	2122
75°	1169	1863	2302
80°	961	2006	2301
85°	736	1851	1978



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	129.6	3.2
10°-20°	370.1	9.1
20°-30°	556.9	13.6
30°-40°	667.4	16.3
40°-50°	695.5	17.0
50°-60°	647.1	15.9
60°-70°	533.0	13.1
70°-80°	363.0	8.9
80°-90°	119.8	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°	1056.6	25.9
0°-40°	1724.1	42.2
0°-60°	3066.6	75.1
0°-90°	4082.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4082.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1371	1371	1371	1371	1371	
5°	1365	1365	1360	1367	1368	130
15°	1305	1307	1308	1320	1322	368
25°	1188	1194	1206	1226	1230	547
35°	1030	1042	1064	1093	1104	644
45°	845	862	898	943	959	651
55°	646	668	724	781	800	576
65°	433	470	544	608	631	430
75°	225	275	358	422	443	237
85°	48	93	120	128	128	59
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1370.7	1370.7	1370.7	1370.7	1370.7
2.5°	1370.7	1370.7	1363.8	1370.7	1370.7
5°	1365.2	1365.2	1359.8	1366.6	1367.9
7.5°	1355.7	1357.0	1351.6	1359.8	1361.1
10°	1342.0	1343.4	1340.7	1348.9	1350.2
12.5°	1325.7	1327.1	1327.1	1336.6	1338.0
15°	1305.3	1306.6	1308.0	1320.2	1321.6
17.5°	1279.4	1283.5	1286.2	1301.2	1303.9
20°	1252.1	1256.2	1261.7	1278.0	1280.7
22.5°	1220.8	1226.2	1235.8	1253.5	1257.6
25°	1188.1	1193.5	1205.8	1226.2	1230.3
27.5°	1151.3	1159.5	1174.5	1196.3	1201.7
30°	1113.1	1121.3	1139.0	1162.2	1170.4
32.5°	1072.3	1083.2	1103.6	1129.5	1137.7
35°	1030.0	1042.3	1064.1	1092.7	1103.6
37.5°	985.1	998.7	1024.6	1055.9	1069.5
40°	938.7	955.1	982.3	1019.1	1034.1
42.5°	892.4	907.4	941.5	981.0	997.3
45°	844.7	862.4	897.9	942.8	959.2
47.5°	795.7	813.4	855.6	903.3	918.3
50°	746.6	764.3	812.0	862.4	880.2
52.5°	693.5	716.7	771.2	821.6	839.3
55°	645.8	667.6	723.5	780.7	799.8
57.5°	591.3	617.2	678.5	738.5	758.9
60°	540.9	568.2	633.6	694.9	715.3
62.5°	489.1	519.1	588.6	651.3	674.4
65°	433.3	470.1	543.6	607.7	630.8
67.5°	382.9	421.0	498.7	564.1	584.5
70°	325.6	372.0	451.0	516.4	539.5
72.5°	276.6	322.9	406.0	470.1	493.2
75°	224.8	275.2	358.3	422.4	442.8
77.5°	173.0	228.9	312.0	361.1	367.9
80°	124.0	182.6	258.9	287.5	297.0
82.5°	87.2	140.3	190.7	209.8	215.3
85°	47.7	92.6	119.9	128.1	128.1
87.5°	20.4	39.5	47.7	49.0	50.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)