

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: P388848

Luminaire Tested: **24CZ2-50VHE-UNV-L935-CD1-SDWPD1-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: P388848  
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-L935-CD1-SDWPD1-U  
Description: 2x4 CRUZE LED TROFFER WITH 3500K, 90 LEDS, AND RIBBED LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4177.4 lumens  
Efficiency: N/A  
Efficacy: 127.7 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

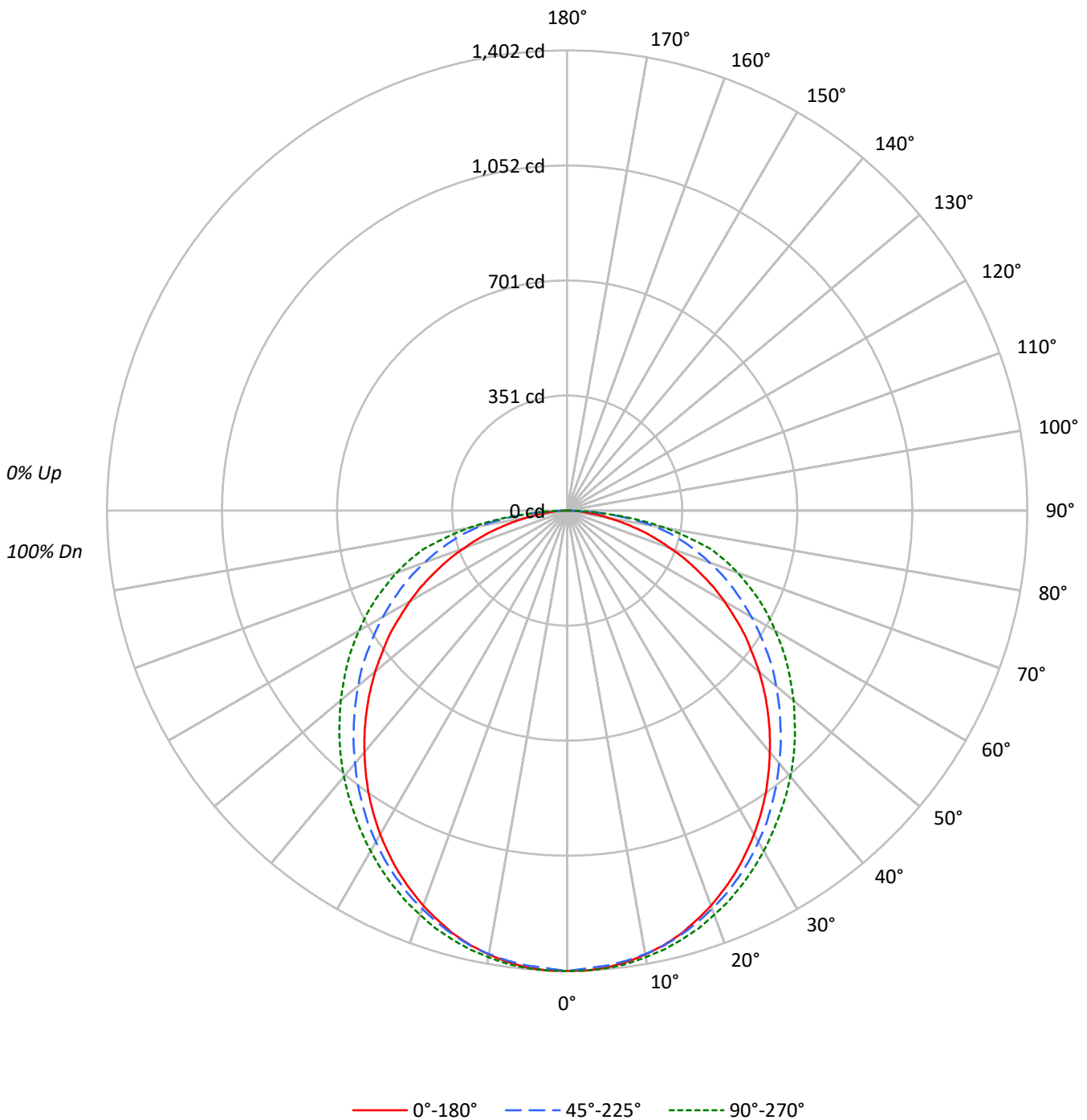
Input Watts (W): 32.7  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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					100			
1	108	103	98	94	105	100	96	92	96	93	89	92	89	87	89	86	84	82					82			
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67					67			
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	58	56					56			
4	81	69	59	52	79	67	59	52	65	57	51	62	56	51	60	55	50	48					48			
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41					41			
6	69	55	46	39	67	54	45	39	52	44	39	50	44	38	49	43	38	36					36			
7	64	50	41	35	62	49	40	34	47	40	34	46	39	34	45	38	34	32					32			
8	59	45	37	31	58	45	36	31	43	36	30	42	35	30	41	35	30	28					28			
9	55	42	33	28	54	41	33	28	40	33	27	39	32	27	38	32	27	25					25			
10	52	38	30	25	51	38	30	25	37	30	25	36	29	25	35	29	25	23					23			

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

	0°	45°	90°
0°	1887	1887	1887
5°	1887	1879	1891
10°	1876	1874	1888
15°	1860	1864	1884
20°	1835	1849	1876
25°	1805	1832	1869
30°	1770	1811	1861
35°	1731	1789	1855
40°	1687	1766	1859
45°	1645	1748	1868
50°	1599	1739	1885
55°	1550	1737	1920
60°	1489	1745	1970
65°	1411	1771	2055
70°	1311	1816	2172
75°	1196	1906	2355
80°	983	2053	2355
85°	753	1894	2024



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	132.6	3.2
10°-20°	378.7	9.1
20°-30°	569.9	13.6
30°-40°	682.9	16.3
40°-50°	711.7	17.0
50°-60°	662.1	15.9
60°-70°	545.4	13.1
70°-80°	371.4	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°	1081.2	25.9
0°-40°	1764.1	42.2
0°-60°	3138.0	75.1
0°-90°	4177.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4177.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1402	1402	1402	1402	1402	
5°	1397	1397	1391	1398	1400	133
15°	1336	1337	1338	1351	1352	376
25°	1216	1221	1234	1255	1259	560
35°	1054	1066	1089	1118	1129	659
45°	864	882	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°	1402.5	1402.5	1402.5	1402.5	1402.5
2.5°	1402.5	1402.5	1395.6	1402.5	1402.5
5°	1397.0	1397.0	1391.4	1398.4	1399.8
7.5°	1387.2	1388.6	1383.0	1391.4	1392.8
10°	1373.3	1374.7	1371.9	1380.2	1381.6
12.5°	1356.5	1357.9	1357.9	1367.7	1369.1
15°	1335.6	1337.0	1338.4	1351.0	1352.4
17.5°	1309.1	1313.3	1316.1	1331.4	1334.2
20°	1281.3	1285.4	1291.0	1307.7	1310.5
22.5°	1249.2	1254.8	1264.5	1282.6	1286.8
25°	1215.7	1221.3	1233.9	1254.8	1258.9
27.5°	1178.1	1186.4	1201.8	1224.1	1229.7
30°	1139.0	1147.4	1165.5	1189.2	1197.6
32.5°	1097.2	1108.4	1129.3	1155.8	1164.1
35°	1054.0	1066.5	1088.9	1118.1	1129.3
37.5°	1008.0	1021.9	1048.4	1080.5	1094.4
40°	960.6	977.3	1005.2	1042.8	1058.2
42.5°	913.2	928.5	963.4	1003.8	1020.5
45°	864.4	882.5	918.8	964.8	981.5
47.5°	814.2	832.3	875.5	924.3	939.7
50°	764.0	782.1	830.9	882.5	900.6
52.5°	709.6	733.3	789.1	840.7	858.8
55°	660.8	683.1	740.3	798.9	818.4
57.5°	605.1	631.6	694.3	755.6	776.6
60°	553.5	581.4	648.3	711.0	731.9
62.5°	500.5	531.2	602.3	666.4	690.1
65°	443.3	481.0	556.3	621.8	645.5
67.5°	391.8	430.8	510.3	577.2	598.1
70°	333.2	380.6	461.5	528.4	552.1
72.5°	283.0	330.4	415.5	481.0	504.7
75°	230.0	281.6	366.7	432.2	453.1
77.5°	177.1	234.2	319.3	369.5	376.4
80°	126.9	186.8	264.9	294.2	303.9
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)