

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: P389757

Luminaire Tested: **24CZ2-45VHE-S-UNV-L930-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: P389757  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-1)  
Test Lab: INNOVATIONS CENTER(G3)  
Issue Date: 2/28/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ2-45VHE-S-UNV-L930-CD1-SDWPD1-U  
Description: 2x4 CRUZE LED TROFFER WITH 3000K, 90 LEDS, AND SMOOTH LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3856.2 lumens  
Efficiency: N/A  
Efficacy: 130.3 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

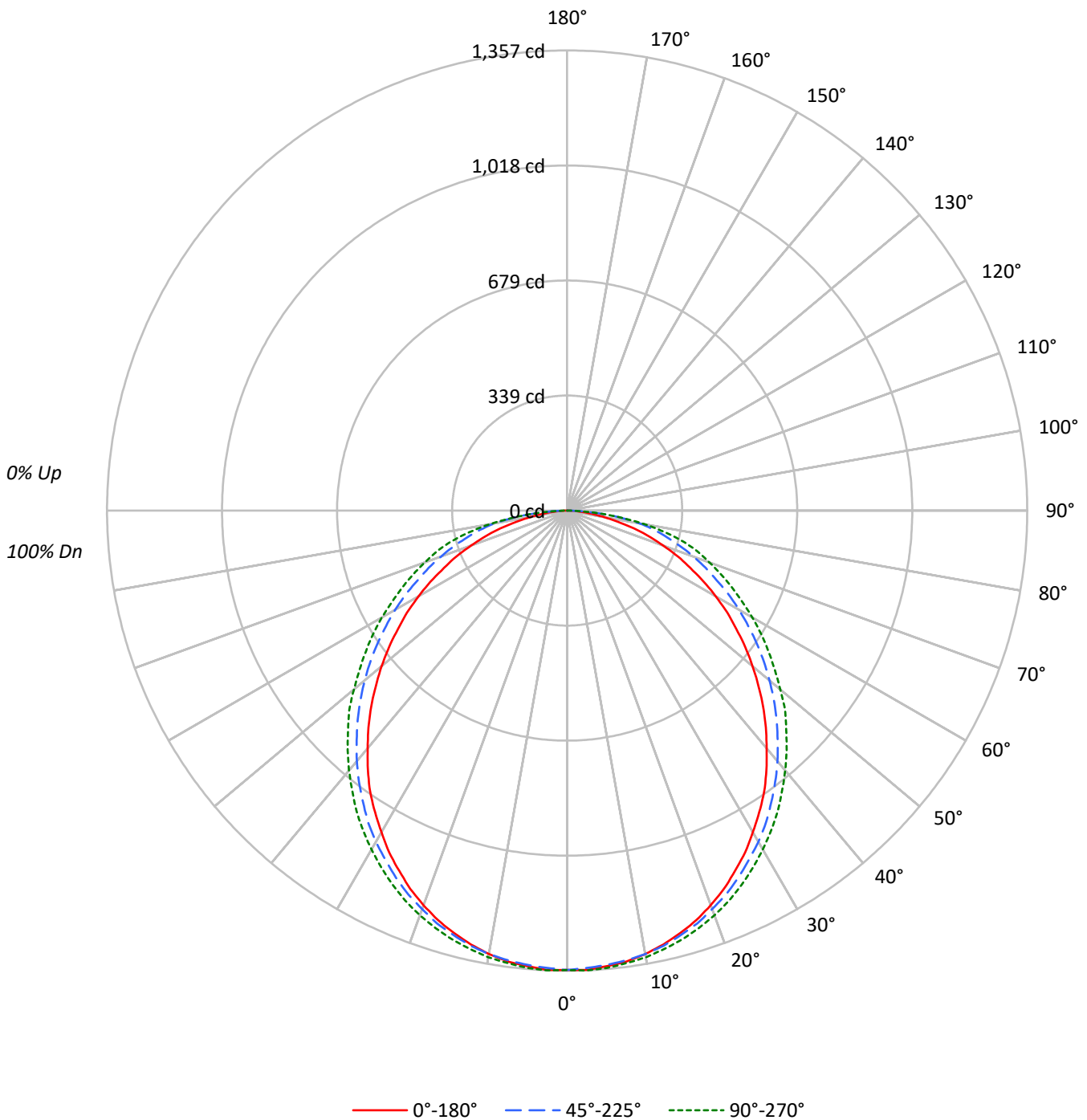
Input Watts (W): 29.6  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	99	95	106	101	97	93	97	93	90	93	90	88	89	87	85	83
2	98	90	83	77	96	88	81	76	84	79	74	81	76	72	78	74	71	69
3	89	79	70	64	87	77	69	63	74	67	62	71	66	61	69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53	63	57	52	61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42
6	70	56	47	40	68	55	47	40	53	46	40	52	45	40	50	44	39	37
7	64	51	42	36	63	50	42	36	48	41	35	47	40	35	46	39	35	33
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29
9	56	43	34	29	55	42	34	29	41	34	28	40	33	28	39	33	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24

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

	0°	45°	90°
0°	1823	1823	1823
5°	1821	1816	1828
10°	1814	1814	1827
15°	1797	1805	1824
20°	1773	1791	1819
25°	1740	1773	1807
30°	1701	1753	1793
35°	1664	1724	1779
40°	1607	1695	1758
45°	1555	1662	1739
50°	1495	1631	1718
55°	1428	1601	1701
60°	1361	1576	1697
65°	1275	1548	1708
70°	1181	1556	1754
75°	1057	1586	1853
80°	854	1680	1813
85°	642	1474	1437



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	128.3	3.3
10°-20°	366.5	9.5
20°-30°	550.9	14.3
30°-40°	656.2	17.0
40°-50°	671.6	17.4
50°-60°	604.6	15.7
60°-70°	474.8	12.3
70°-80°	308.1	8.0
80°-90°	95.3	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°	1045.6	27.1
0°-40°	1701.8	44.1
0°-60°	2977.9	77.2
0°-90°	3856.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3856.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1355	1355	1355	1355	1355	
5°	1349	1351	1345	1352	1354	128
15°	1290	1294	1296	1307	1309	364
25°	1172	1182	1194	1214	1218	540
35°	1013	1025	1050	1075	1083	632
45°	817	837	873	906	914	630
55°	609	636	682	718	725	546
65°	400	431	486	527	536	399
75°	203	242	305	347	356	215
85°	42	77	96	93	93	50
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1354.7	1354.7	1354.7	1354.7	1354.7
2.5°	1355.9	1355.9	1349.8	1355.9	1357.2
5°	1348.6	1351.0	1344.9	1352.3	1353.5
7.5°	1341.2	1341.2	1337.6	1344.9	1346.1
10°	1327.8	1329.0	1327.8	1336.3	1337.6
12.5°	1310.6	1313.1	1314.3	1322.9	1324.1
15°	1289.8	1293.5	1295.9	1306.9	1309.4
17.5°	1266.5	1270.2	1276.3	1288.6	1291.0
20°	1238.3	1243.2	1250.6	1266.5	1270.2
22.5°	1207.7	1212.6	1224.9	1239.6	1245.7
25°	1172.2	1182.0	1194.3	1213.8	1217.5
27.5°	1136.7	1145.3	1161.2	1182.0	1186.9
30°	1095.0	1108.5	1128.1	1148.9	1153.8
32.5°	1054.6	1068.1	1091.4	1113.4	1119.5
35°	1013.0	1025.2	1049.7	1075.4	1082.8
37.5°	965.2	981.1	1008.1	1033.8	1041.1
40°	915.0	934.6	965.2	992.1	1000.7
42.5°	867.2	888.0	918.7	948.1	957.8
45°	817.0	836.6	873.3	906.4	913.8
47.5°	765.5	787.6	826.8	859.9	872.1
50°	714.1	737.4	779.0	813.3	820.7
52.5°	662.7	687.2	731.2	768.0	771.7
55°	608.8	635.7	682.3	717.8	725.1
57.5°	559.8	583.0	633.3	670.0	678.6
60°	505.9	531.6	585.5	619.8	630.8
62.5°	454.4	481.4	537.7	572.0	581.8
65°	400.5	431.2	486.3	526.7	536.5
67.5°	354.0	383.4	442.2	481.4	491.2
70°	300.1	333.2	395.6	436.1	445.9
72.5°	253.5	287.8	350.3	389.5	404.2
75°	203.3	242.5	305.0	346.6	356.4
77.5°	154.3	199.7	263.3	295.2	295.2
80°	110.2	158.0	216.8	231.5	234.0
82.5°	72.3	118.8	160.5	159.2	159.2
85°	41.6	77.2	95.5	93.1	93.1
87.5°	15.9	31.8	34.3	34.3	33.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)