

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: P388922

Luminaire Tested: **24CZ2-60HE-SQR-UNV-L930-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: P388922  
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: 24CZ2-60HE-SQR-UNV-L930-CD1-U  
Description: 2x4 CRUZE LED TROFFER WITH 3000K, 90 LEDS, AND SQUARE LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4763.0 lumens  
Efficiency: N/A  
Efficacy: 108.0 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

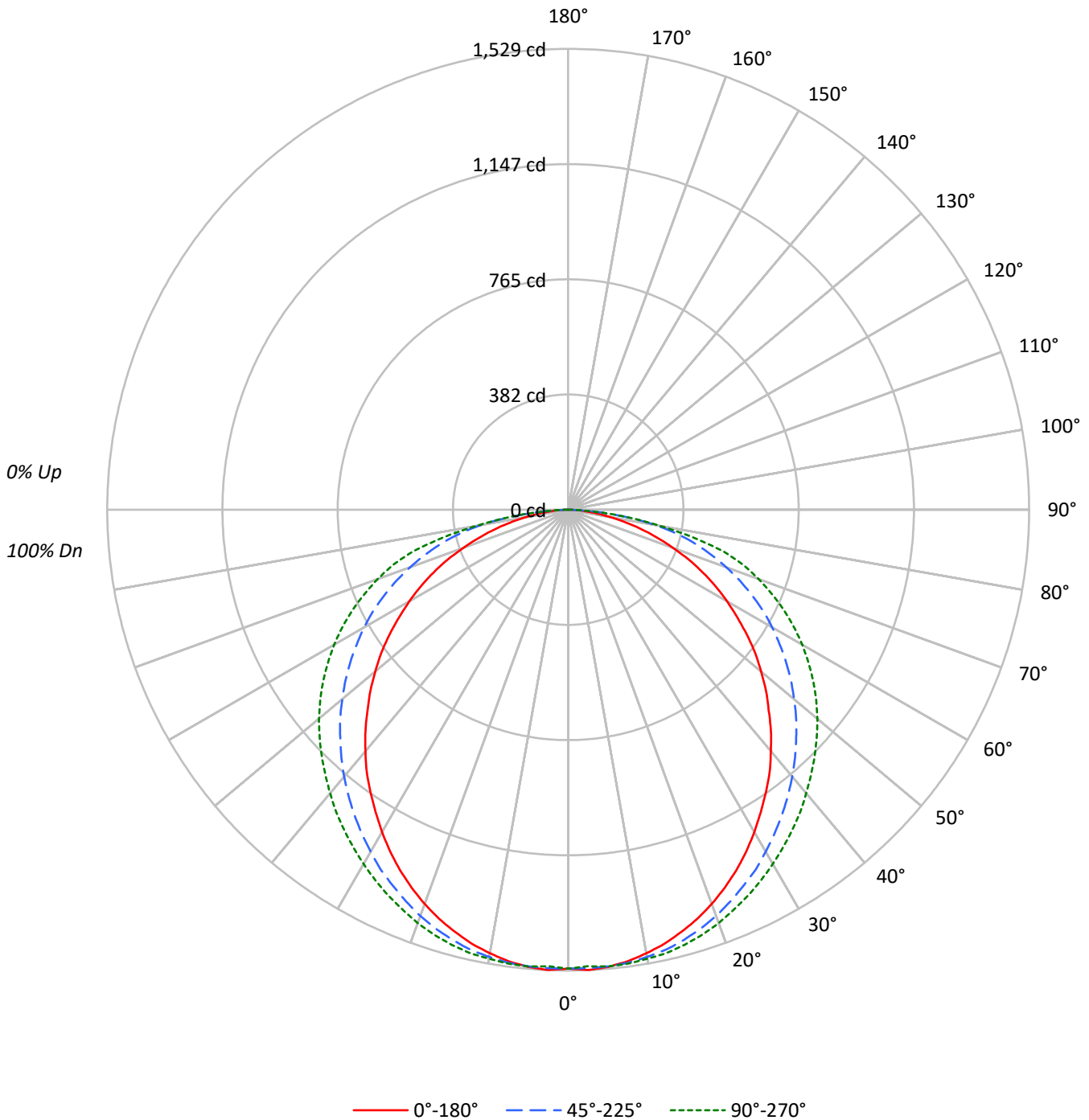
Input Watts (W): 44.1  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102
1	108	103	98	94	105	100	96	92	96	93	89	92	89	87	89	86	84
2	98	89	81	75	95	87	80	74	83	78	73	80	75	71	77	73	69
3	89	77	69	62	86	76	68	61	73	66	60	70	64	59	67	62	58
4	81	68	59	52	78	67	58	52	64	57	51	62	55	50	60	54	49
5	74	61	51	44	72	60	51	44	57	50	44	55	49	43	54	48	43
6	68	55	45	39	66	54	45	38	52	44	38	50	43	38	48	42	37
7	63	49	40	34	62	49	40	34	47	39	34	45	39	33	44	38	33
8	59	45	36	30	57	44	36	30	43	35	30	42	35	30	40	34	30
9	55	41	33	27	54	41	33	27	39	32	27	38	32	27	37	31	27
10	52	38	30	25	50	37	30	24	36	29	24	36	29	24	35	29	24

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

	0°	45°	90°
0°	2049	2049	2049
5°	2056	2054	2054
10°	2041	2059	2067
15°	2020	2059	2081
20°	1993	2054	2090
25°	1959	2043	2097
30°	1918	2036	2109
35°	1878	2031	2129
40°	1837	2030	2158
45°	1790	2035	2200
50°	1748	2048	2259
55°	1697	2070	2328
60°	1638	2104	2412
65°	1567	2143	2514
70°	1454	2196	2642
75°	1316	2273	2764
80°	1109	2279	2376
85°	849	1724	1724



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	144.5	3.0
10°-20°	415.8	8.7
20°-30°	631.6	13.3
30°-40°	768.2	16.1
40°-50°	817.9	17.2
50°-60°	779.0	16.4
60°-70°	651.5	13.7
70°-80°	434.3	9.1
80°-90°	120.2	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°	1191.9	25.0
0°-40°	1960.1	41.2
0°-60°	3557.0	74.7
0°-90°	4763.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4763.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1522	1522	1522	1522	1522	
5°	1522	1513	1521	1521	1521	144
15°	1450	1453	1478	1490	1494	409
25°	1320	1337	1376	1400	1412	608
35°	1143	1176	1236	1277	1296	716
45°	940	991	1070	1129	1156	727
55°	724	786	882	959	992	647
65°	492	565	673	756	790	486
75°	253	333	437	511	532	268
85°	55	102	112	110	112	66
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1522.5	1522.5	1522.5	1522.5	1522.5
2.5°	1528.8	1517.8	1522.5	1522.5	1516.2
5°	1522.5	1513.0	1520.9	1520.9	1520.9
7.5°	1511.5	1503.6	1516.2	1519.3	1519.3
10°	1494.2	1491.0	1506.8	1511.5	1513.0
12.5°	1475.3	1473.7	1495.7	1502.0	1506.8
15°	1450.1	1453.3	1478.4	1489.5	1494.2
17.5°	1423.4	1429.7	1458.0	1473.7	1478.4
20°	1391.9	1401.4	1434.4	1450.1	1459.6
22.5°	1357.3	1371.5	1406.1	1425.0	1436.0
25°	1319.6	1336.9	1376.2	1399.8	1412.4
27.5°	1278.7	1300.7	1346.3	1373.1	1385.7
30°	1234.7	1259.8	1310.2	1341.6	1357.3
32.5°	1189.0	1218.9	1274.0	1308.6	1327.5
35°	1143.4	1176.5	1236.2	1277.1	1296.0
37.5°	1097.8	1130.9	1196.9	1241.0	1264.5
40°	1045.9	1085.2	1156.0	1204.8	1228.4
42.5°	995.6	1038.1	1113.6	1167.0	1192.2
45°	940.5	990.9	1069.5	1129.3	1156.0
47.5°	890.2	940.5	1025.5	1088.4	1118.3
50°	835.2	888.6	978.3	1047.5	1079.0
52.5°	781.7	836.7	931.1	1005.0	1036.5
55°	723.5	786.4	882.4	959.4	992.4
57.5°	665.3	732.9	832.0	912.2	945.3
60°	608.7	677.9	781.7	861.9	896.5
62.5°	552.1	621.3	729.8	811.6	844.6
65°	492.3	564.6	673.2	756.5	789.6
67.5°	432.5	508.0	616.5	699.9	731.4
70°	369.6	449.8	558.3	640.1	671.6
72.5°	311.4	391.6	498.6	578.8	608.7
75°	253.2	333.4	437.2	511.2	531.6
77.5°	196.6	276.8	369.6	418.4	423.1
80°	143.1	218.6	294.1	308.3	306.7
82.5°	95.9	163.6	202.9	204.5	209.2
85°	55.0	102.2	111.7	110.1	111.7
87.5°	22.0	36.2	31.5	23.6	23.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)