

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: P388849

Luminaire Tested: **24CZ2-55HE-SQR-UNV-L930-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: P388849  
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: 24CZ2-55HE-SQR-UNV-L930-CD1-SWPD1-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: 4354.1 lumens  
Efficiency: N/A  
Efficacy: 100.1 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

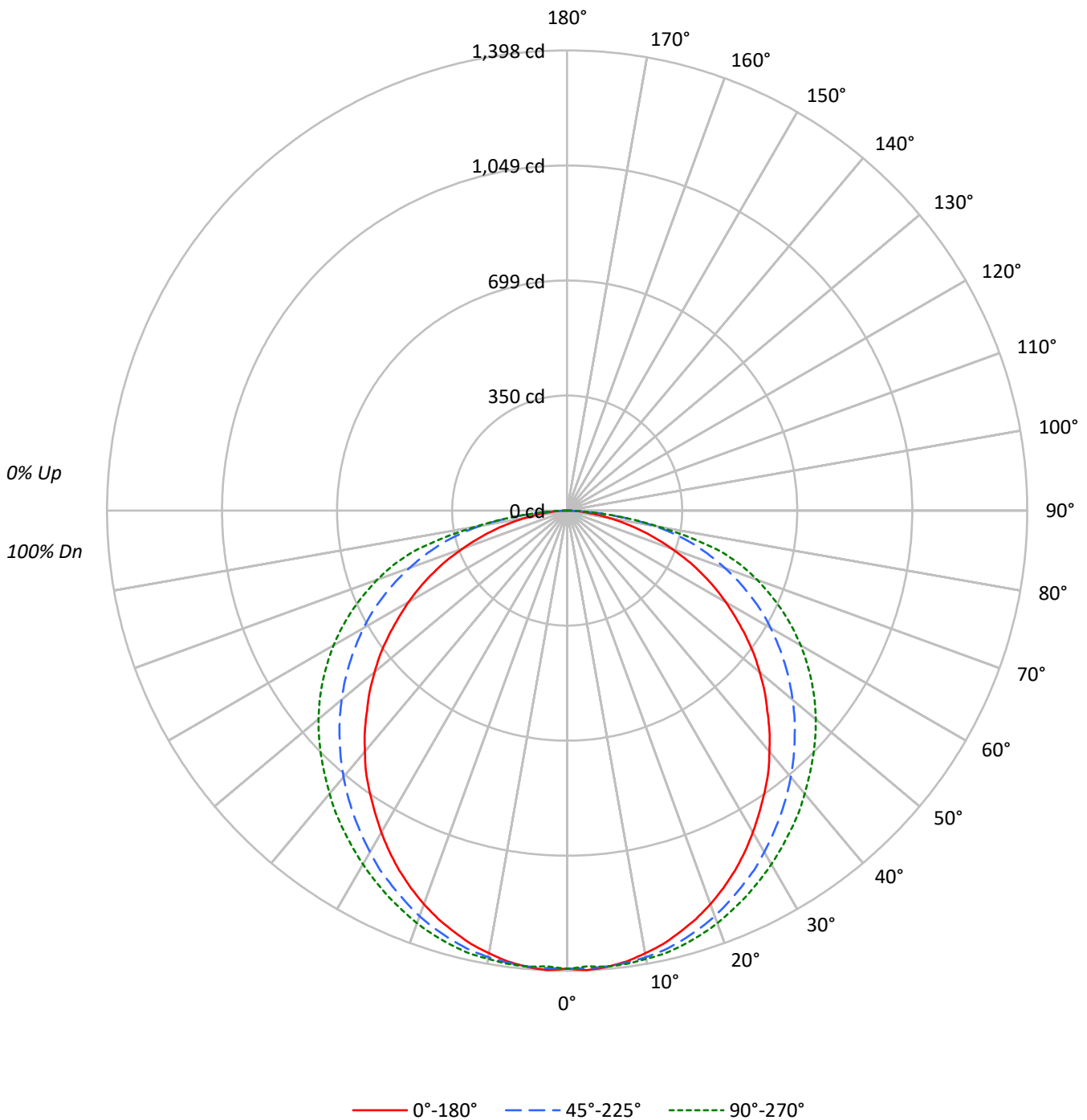
Input Watts (W): 43.5  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	81	75	95	87	80	74	83	78	73	80	75	71	77	73	69	67
3	89	77	69	62	86	76	68	61	73	66	60	70	64	59	67	62	58	56
4	81	68	59	52	78	67	58	52	64	57	51	62	55	50	60	54	49	47
5	74	61	51	44	72	60	51	44	57	50	44	55	49	43	54	48	43	41
6	68	55	45	39	66	54	45	38	52	44	38	50	43	38	48	42	37	35
7	63	49	40	34	62	49	40	34	47	39	34	45	39	33	44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30	42	35	30	40	34	30	28
9	55	41	33	27	54	41	33	27	39	32	27	38	32	27	37	31	27	25
10	52	38	30	25	50	37	30	24	36	29	24	36	29	24	35	29	24	22

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

	0°	45°	90°
0°	1873	1873	1873
5°	1880	1878	1878
10°	1866	1882	1890
15°	1846	1883	1903
20°	1822	1878	1911
25°	1791	1868	1917
30°	1754	1861	1928
35°	1717	1856	1946
40°	1679	1856	1972
45°	1636	1860	2011
50°	1598	1872	2065
55°	1552	1892	2128
60°	1497	1923	2205
65°	1433	1959	2298
70°	1329	2008	2415
75°	1203	2078	2527
80°	1013	2084	2173
85°	777	1576	1576



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	132.1	3.0
10°-20°	380.1	8.7
20°-30°	577.3	13.3
30°-40°	702.3	16.1
40°-50°	747.7	17.2
50°-60°	712.1	16.4
60°-70°	595.5	13.7
70°-80°	397.1	9.1
80°-90°	109.9	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°	1089.6	25.0
0°-40°	1791.8	41.2
0°-60°	3251.6	74.7
0°-90°	4354.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4354.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1392	1392	1392	1392	1392	
5°	1392	1383	1390	1390	1390	132
15°	1326	1328	1352	1362	1366	374
25°	1206	1222	1258	1280	1291	555
35°	1045	1076	1130	1168	1185	654
45°	860	906	978	1032	1057	665
55°	661	719	807	877	907	591
65°	450	516	615	692	722	445
75°	232	305	400	467	486	245
85°	50	94	102	101	102	61
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1391.8	1391.8	1391.8	1391.8	1391.8
2.5°	1397.5	1387.5	1391.8	1391.8	1386.0
5°	1391.8	1383.2	1390.3	1390.3	1390.3
7.5°	1381.7	1374.5	1386.0	1388.9	1388.9
10°	1365.9	1363.0	1377.4	1381.7	1383.2
12.5°	1348.6	1347.2	1367.3	1373.1	1377.4
15°	1325.6	1328.5	1351.5	1361.6	1365.9
17.5°	1301.2	1307.0	1332.8	1347.2	1351.5
20°	1272.4	1281.1	1311.3	1325.6	1334.3
22.5°	1240.8	1253.8	1285.4	1302.6	1312.7
25°	1206.3	1222.1	1258.1	1279.6	1291.1
27.5°	1168.9	1189.1	1230.7	1255.2	1266.7
30°	1128.7	1151.7	1197.7	1226.4	1240.8
32.5°	1087.0	1114.3	1164.6	1196.2	1213.5
35°	1045.3	1075.5	1130.1	1167.5	1184.7
37.5°	1003.6	1033.8	1094.2	1134.4	1156.0
40°	956.1	992.1	1056.8	1101.3	1122.9
42.5°	910.1	948.9	1018.0	1066.8	1089.8
45°	859.8	905.8	977.7	1032.3	1056.8
47.5°	813.8	859.8	937.4	995.0	1022.3
50°	763.5	812.4	894.3	957.6	986.3
52.5°	714.6	764.9	851.2	918.7	947.5
55°	661.4	718.9	806.6	877.1	907.2
57.5°	608.2	670.0	760.6	833.9	864.1
60°	556.4	619.7	714.6	787.9	819.5
62.5°	504.7	567.9	667.1	741.9	772.1
65°	450.0	516.2	615.4	691.6	721.8
67.5°	395.4	464.4	563.6	639.8	668.6
70°	337.9	411.2	510.4	585.2	613.9
72.5°	284.7	358.0	455.8	529.1	556.4
75°	231.5	304.8	399.7	467.3	486.0
77.5°	179.7	253.1	337.9	382.5	386.8
80°	130.8	199.9	268.9	281.8	280.4
82.5°	87.7	149.5	185.5	186.9	191.2
85°	50.3	93.5	102.1	100.6	102.1
87.5°	20.1	33.1	28.8	21.6	21.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)