

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: P387581

Luminaire Tested: **14CZ2-60HE-SQR-UNV-L935-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: P387581  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1911-580-2)  
Test Lab: INNOVATIONS CENTER(G2)  
Issue Date: 2/28/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 14CZ2-60HE-SQR-UNV-L935-CD1-U  
Description: 1x4 CRUZE LED TROFFER WITH 3500K, 90 LEDS, AND SQUARE LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4889.0 lumens  
Efficiency: N/A  
Efficacy: 101.2 lumens/watt  
Spacing Criteria (0/90/45): 1.23 / 1.34 / 1.44  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

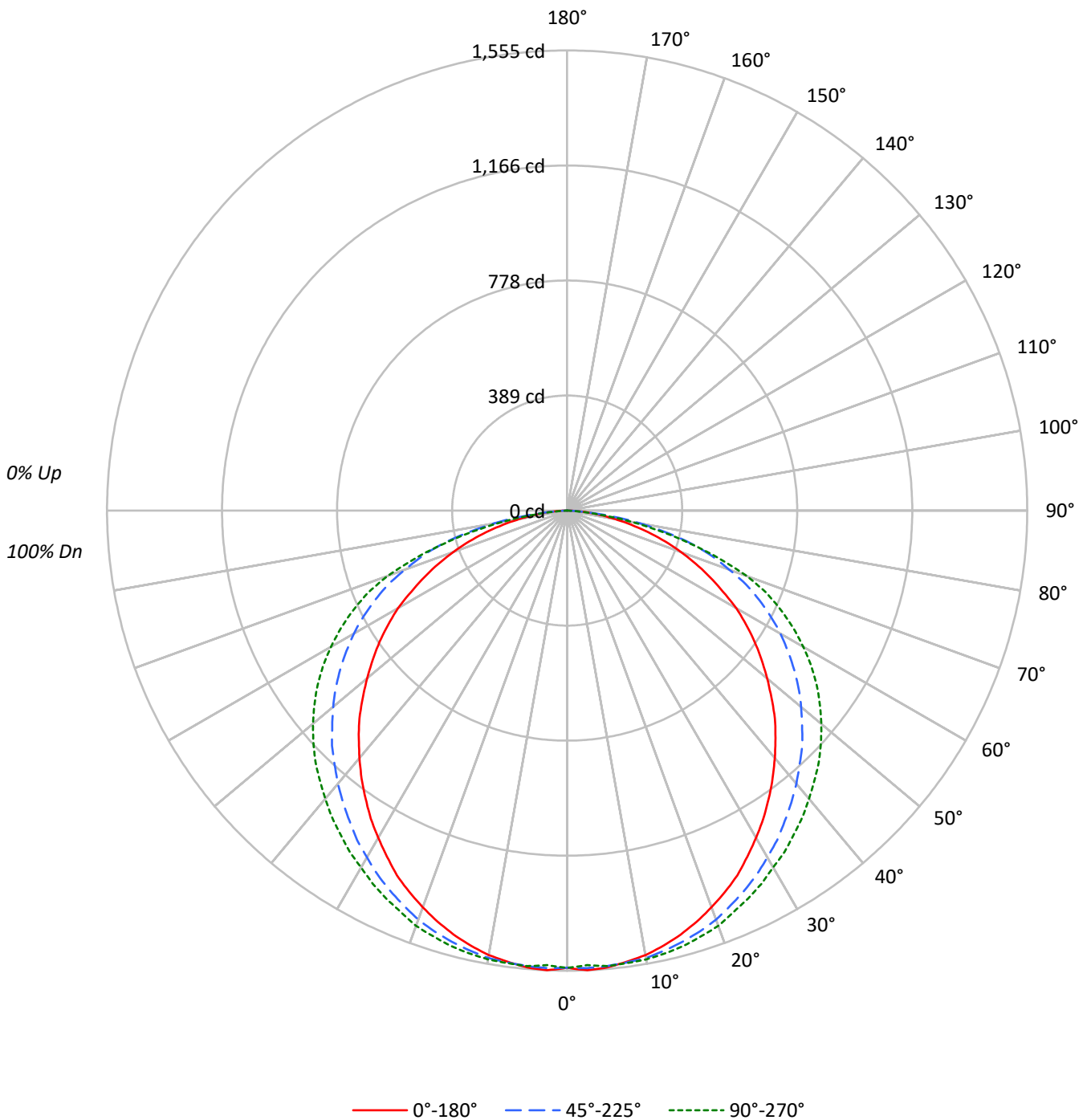
Input Watts (W): 48.3  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	105	101	97	93	97	93	90	93	90	87	89	87	85	83
2	98	89	82	76	95	87	81	75	84	78	73	80	76	72	77	73	70	68
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	59	56
4	81	68	59	52	79	67	59	52	65	57	51	62	56	51	60	54	50	48
5	74	61	52	45	72	60	51	44	58	50	44	56	49	43	54	48	43	41
6	68	55	45	39	67	54	45	39	52	44	38	50	43	38	49	42	38	35
7	63	49	40	34	62	49	40	34	47	39	34	46	39	33	44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30	42	35	30	41	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°	4158	4158	4158
5°	4187	4173	4173
10°	4168	4195	4208
15°	4133	4201	4242
20°	4086	4212	4276
25°	4039	4207	4295
30°	3966	4204	4326
35°	3902	4209	4387
40°	3835	4233	4467
45°	3779	4276	4576
50°	3693	4322	4693
55°	3630	4393	4832
60°	3554	4483	4960
65°	3389	4565	5084
70°	3218	4575	5080
75°	2947	4560	4483
80°	2520	3894	3474
85°	1979	2208	1294



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	146.8	3.0
10°-20°	424.1	8.7
20°-30°	648.6	13.3
30°-40°	795.0	16.3
40°-50°	855.0	17.5
50°-60°	821.7	16.8
60°-70°	684.2	14.0
70°-80°	419.9	8.6
80°-90°	93.6	1.9
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°	1219.6	24.9
0°-40°	2014.6	41.2
0°-60°	3691.4	75.5
0°-90°	4889.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4889.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1545	1545	1545	1545	1545	
5°	1550	1535	1545	1545	1545	147
15°	1483	1478	1508	1518	1523	418
25°	1360	1372	1417	1434	1446	626
35°	1188	1217	1281	1316	1336	743
45°	993	1037	1124	1175	1202	764
55°	774	840	936	1000	1030	691
65°	532	614	717	776	798	527
75°	283	370	439	436	431	300
85°	64	96	72	49	42	77
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1545.0	1545.0	1545.0	1545.0	1545.0
2.5°	1554.8	1540.0	1547.4	1545.0	1537.6
5°	1549.9	1535.1	1545.0	1545.0	1545.0
7.5°	1537.6	1525.3	1540.0	1542.5	1542.5
10°	1525.3	1515.4	1535.1	1537.6	1540.0
12.5°	1505.5	1498.1	1522.8	1527.7	1532.6
15°	1483.4	1478.4	1508.0	1517.9	1522.8
17.5°	1456.3	1458.7	1490.8	1503.1	1508.0
20°	1426.7	1434.1	1471.0	1483.4	1493.2
22.5°	1394.7	1404.5	1443.9	1458.7	1468.6
25°	1360.2	1372.5	1416.8	1434.1	1446.4
27.5°	1318.3	1338.0	1387.3	1409.4	1421.8
30°	1276.4	1298.6	1352.8	1379.9	1392.2
32.5°	1234.5	1259.1	1320.7	1347.8	1367.6
35°	1187.7	1217.2	1281.3	1315.8	1335.5
37.5°	1140.9	1175.4	1244.4	1283.8	1306.0
40°	1091.6	1128.5	1204.9	1249.3	1271.5
42.5°	1042.3	1084.2	1163.0	1212.3	1237.0
45°	993.0	1037.4	1123.6	1175.4	1202.5
47.5°	936.3	990.6	1076.8	1135.9	1163.0
50°	882.1	941.3	1032.4	1094.0	1121.1
52.5°	827.9	889.5	985.6	1049.7	1076.8
55°	773.7	840.2	936.3	1000.4	1030.0
57.5°	717.0	786.0	884.6	951.1	978.2
60°	660.4	731.8	832.9	894.5	921.6
62.5°	593.8	677.6	776.2	837.8	862.4
65°	532.2	613.6	717.0	776.2	798.4
67.5°	470.6	554.4	655.4	709.6	729.4
70°	409.0	492.8	581.5	633.3	645.6
72.5°	347.4	431.2	515.0	544.6	539.6
75°	283.4	369.6	438.6	436.1	431.2
77.5°	221.8	305.5	347.4	330.2	322.8
80°	162.6	243.9	251.3	234.1	224.2
82.5°	110.9	174.9	157.7	138.0	128.1
85°	64.1	96.1	71.5	49.3	41.9
87.5°	27.1	24.6	7.4	7.4	4.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)