

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: P388949

Luminaire Tested: **24CZ2-60VHE-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: P388949
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: 24CZ2-60VHE-SQR-UNV-L935-CD1-U
Description: 2x4 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: 4916.6 lumens
Efficiency: N/A
Efficacy: 127.0 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

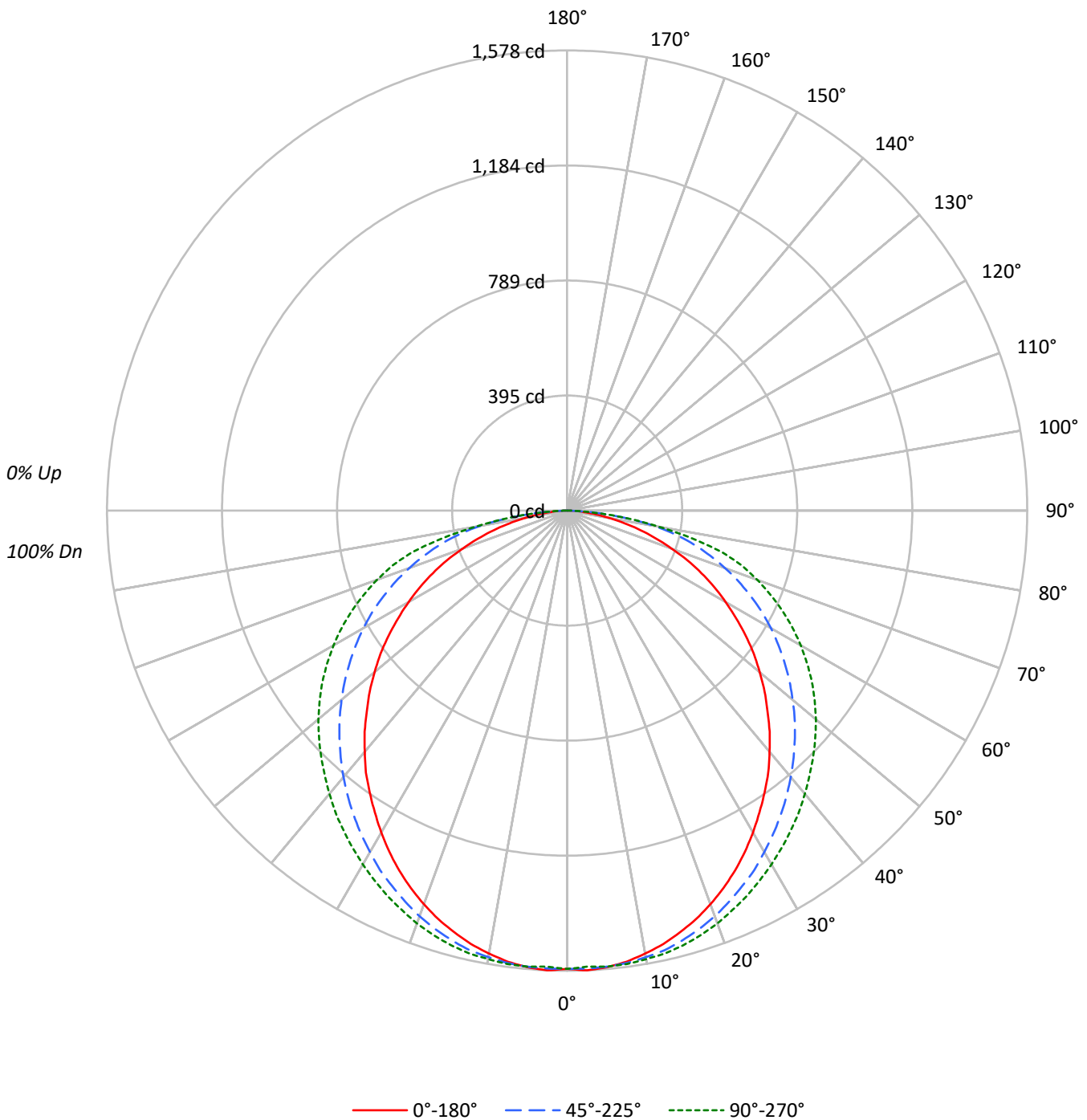
Input Watts (W): 38.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	2115	2115	2115
5°	2123	2120	2120
10°	2107	2125	2134
15°	2085	2126	2148
20°	2057	2120	2157
25°	2022	2109	2164
30°	1980	2101	2177
35°	1939	2096	2197
40°	1896	2096	2227
45°	1847	2101	2271
50°	1805	2114	2331
55°	1752	2137	2403
60°	1691	2171	2490
65°	1618	2212	2595
70°	1501	2268	2727
75°	1359	2346	2853
80°	1144	2352	2453
85°	877	1780	1780



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	149.2	3.0
10°-20°	429.2	8.7
20°-30°	651.9	13.3
30°-40°	793.0	16.1
40°-50°	844.3	17.2
50°-60°	804.1	16.4
60°-70°	672.5	13.7
70°-80°	448.4	9.1
80°-90°	124.1	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°	1230.3	25.0
0°-40°	2023.3	41.2
0°-60°	3671.7	74.7
0°-90°	4916.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4916.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1572	1572	1572	1572	1572	
5°	1572	1562	1570	1570	1570	149
15°	1497	1500	1526	1538	1542	422
25°	1362	1380	1421	1445	1458	627
35°	1180	1214	1276	1318	1338	739
45°	971	1023	1104	1166	1193	751
55°	747	812	911	990	1024	668
65°	508	583	695	781	815	502
75°	261	344	451	528	549	277
85°	57	106	115	114	115	69
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1571.6	1571.6	1571.6	1571.6	1571.6
2.5°	1578.1	1566.7	1571.6	1571.6	1565.1
5°	1571.6	1561.8	1570.0	1570.0	1570.0
7.5°	1560.2	1552.1	1565.1	1568.3	1568.3
10°	1542.4	1539.1	1555.3	1560.2	1561.8
12.5°	1522.9	1521.3	1544.0	1550.5	1555.3
15°	1496.9	1500.1	1526.1	1537.5	1542.4
17.5°	1469.3	1475.8	1505.0	1521.3	1526.1
20°	1436.8	1446.6	1480.7	1496.9	1506.6
22.5°	1401.1	1415.7	1451.4	1470.9	1482.3
25°	1362.1	1380.0	1420.6	1444.9	1457.9
27.5°	1319.9	1342.7	1389.7	1417.3	1430.3
30°	1274.5	1300.5	1352.4	1384.9	1401.1
32.5°	1227.4	1258.2	1315.1	1350.8	1370.3
35°	1180.3	1214.4	1276.1	1318.3	1337.8
37.5°	1133.2	1167.3	1235.5	1281.0	1305.3
40°	1079.7	1120.2	1193.3	1243.6	1268.0
42.5°	1027.7	1071.5	1149.5	1204.7	1230.6
45°	970.9	1022.8	1104.0	1165.7	1193.3
47.5°	918.9	970.9	1058.5	1123.5	1154.3
50°	862.1	917.3	1009.8	1081.3	1113.7
52.5°	806.9	863.7	961.1	1037.4	1069.9
55°	746.8	811.8	910.8	990.4	1024.5
57.5°	686.8	756.6	858.9	941.7	975.7
60°	628.3	699.7	806.9	889.7	925.4
62.5°	569.9	641.3	753.3	837.7	871.8
65°	508.2	582.9	694.9	780.9	815.0
67.5°	446.5	524.4	636.4	722.5	754.9
70°	381.5	464.3	576.4	660.8	693.3
72.5°	321.5	404.3	514.7	597.5	628.3
75°	261.4	344.2	451.3	527.6	548.8
77.5°	202.9	285.7	381.5	431.9	436.7
80°	147.7	225.7	303.6	318.2	316.6
82.5°	99.0	168.8	209.4	211.1	215.9
85°	56.8	105.5	115.3	113.6	115.3
87.5°	22.7	37.3	32.5	24.4	24.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)