

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: P388996

Luminaire Tested: **24CZ2-65HE-SQR-UNV-L935-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: P388996
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: 24CZ2-65HE-SQR-UNV-L935-CD1-SWPD1-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: 5284.6 lumens
Efficiency: N/A
Efficacy: 108.1 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

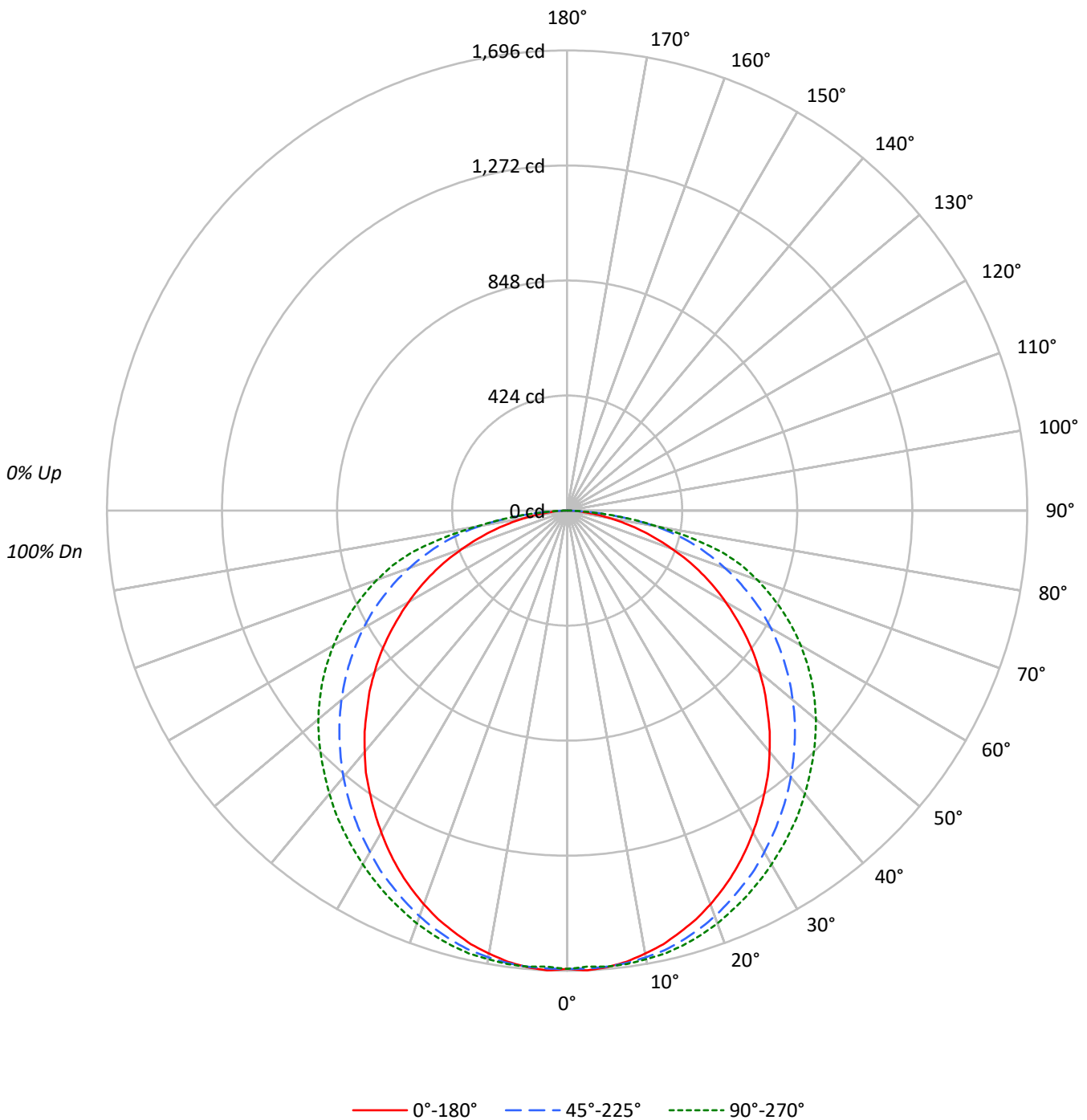
Input Watts (W): 48.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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					100			
1	108	103	98	94	105	100	96	92	96	93	89	92	89	87	89	86	84	82					82			
2	98	89	81	75	95	87	80	74	83	78	73	80	75	71	77	73	69	67					67			
3	89	77	69	62	86	76	68	61	73	66	60	70	64	59	67	62	58	56					56			
4	81	68	59	52	78	67	58	52	64	57	51	62	55	50	60	54	49	47					47			
5	74	61	51	44	72	60	51	44	57	50	44	55	49	43	54	48	43	41					41			
6	68	55	45	39	66	54	45	38	52	44	38	50	43	38	48	42	37	35					35			
7	63	49	40	34	62	49	40	34	47	39	34	45	39	33	44	38	33	31					31			
8	59	45	36	30	57	44	36	30	43	35	30	42	35	30	40	34	30	28					28			
9	55	41	33	27	54	41	33	27	39	32	27	38	32	27	37	31	27	25					25			
10	52	38	30	25	50	37	30	24	36	29	24	36	29	24	35	29	24	22					22			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2273	2273	2273
5°	2281	2279	2279
10°	2265	2284	2294
15°	2241	2285	2309
20°	2211	2279	2319
25°	2174	2267	2326
30°	2128	2258	2340
35°	2084	2253	2362
40°	2038	2253	2394
45°	1986	2258	2441
50°	1940	2272	2506
55°	1883	2297	2583
60°	1817	2334	2677
65°	1739	2378	2789
70°	1613	2437	2931
75°	1461	2522	3066
80°	1230	2528	2637
85°	943	1913	1913



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	160.3	3.0
10°-20°	461.3	8.7
20°-30°	700.7	13.3
30°-40°	852.3	16.1
40°-50°	907.5	17.2
50°-60°	864.3	16.4
60°-70°	722.8	13.7
70°-80°	481.9	9.1
80°-90°	133.3	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°	1322.4	25.0
0°-40°	2174.7	41.2
0°-60°	3946.5	74.7
0°-90°	5284.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5284.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1689	1689	1689	1689	1689	
5°	1689	1679	1688	1688	1688	160
15°	1609	1612	1640	1653	1658	454
25°	1464	1483	1527	1553	1567	674
35°	1269	1305	1372	1417	1438	794
45°	1044	1099	1187	1253	1283	807
55°	803	872	979	1064	1101	718
65°	546	626	747	839	876	540
75°	281	370	485	567	590	298
85°	61	113	124	122	124	74
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1689.2	1689.2	1689.2	1689.2	1689.2
2.5°	1696.2	1684.0	1689.2	1689.2	1682.2
5°	1689.2	1678.7	1687.5	1687.5	1687.5
7.5°	1677.0	1668.3	1682.2	1685.7	1685.7
10°	1657.8	1654.3	1671.8	1677.0	1678.7
12.5°	1636.9	1635.1	1659.5	1666.5	1671.8
15°	1608.9	1612.4	1640.4	1652.6	1657.8
17.5°	1579.3	1586.3	1617.7	1635.1	1640.4
20°	1544.4	1554.8	1591.5	1608.9	1619.4
22.5°	1506.0	1521.7	1560.1	1581.0	1593.2
25°	1464.1	1483.3	1526.9	1553.1	1567.1
27.5°	1418.7	1443.2	1493.8	1523.4	1537.4
30°	1369.9	1397.8	1453.6	1488.5	1506.0
32.5°	1319.3	1352.4	1413.5	1451.9	1472.8
35°	1268.7	1305.3	1371.6	1417.0	1437.9
37.5°	1218.0	1254.7	1328.0	1376.9	1403.0
40°	1160.5	1204.1	1282.6	1336.7	1362.9
42.5°	1104.6	1151.7	1235.5	1294.8	1322.8
45°	1043.5	1099.4	1186.6	1253.0	1282.6
47.5°	987.7	1043.5	1137.8	1207.6	1240.7
50°	926.6	986.0	1085.4	1162.2	1197.1
52.5°	867.3	928.4	1033.1	1115.1	1150.0
55°	802.7	872.5	979.0	1064.5	1101.1
57.5°	738.2	813.2	923.1	1012.1	1048.8
60°	675.3	752.1	867.3	956.3	994.7
62.5°	612.5	689.3	809.7	900.4	937.1
65°	546.2	626.5	746.9	839.4	876.0
67.5°	479.9	563.7	684.1	776.6	811.5
70°	410.1	499.1	619.5	710.2	745.1
72.5°	345.5	434.5	553.2	642.2	675.3
75°	281.0	370.0	485.1	567.1	589.8
77.5°	218.1	307.1	410.1	464.2	469.4
80°	158.8	242.6	326.3	342.0	340.3
82.5°	106.4	181.5	225.1	226.9	232.1
85°	61.1	113.4	123.9	122.2	123.9
87.5°	24.4	40.1	34.9	26.2	26.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)