

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: P389829

Luminaire Tested: **24CZ2-60VHE-S-UNV-L930-CD1-SDWPD1-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: P389829
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-1)
Test Lab: INNOVATIONS CENTER(G3)
Issue Date: 2/28/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-60VHE-S-UNV-L930-CD1-SDWPD1-U
Description: 2x4 CRUZE LED TROFFER WITH 3000K, 90 LEDS, AND SMOOTH LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5121.6 lumens
Efficiency: N/A
Efficacy: 132.3 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

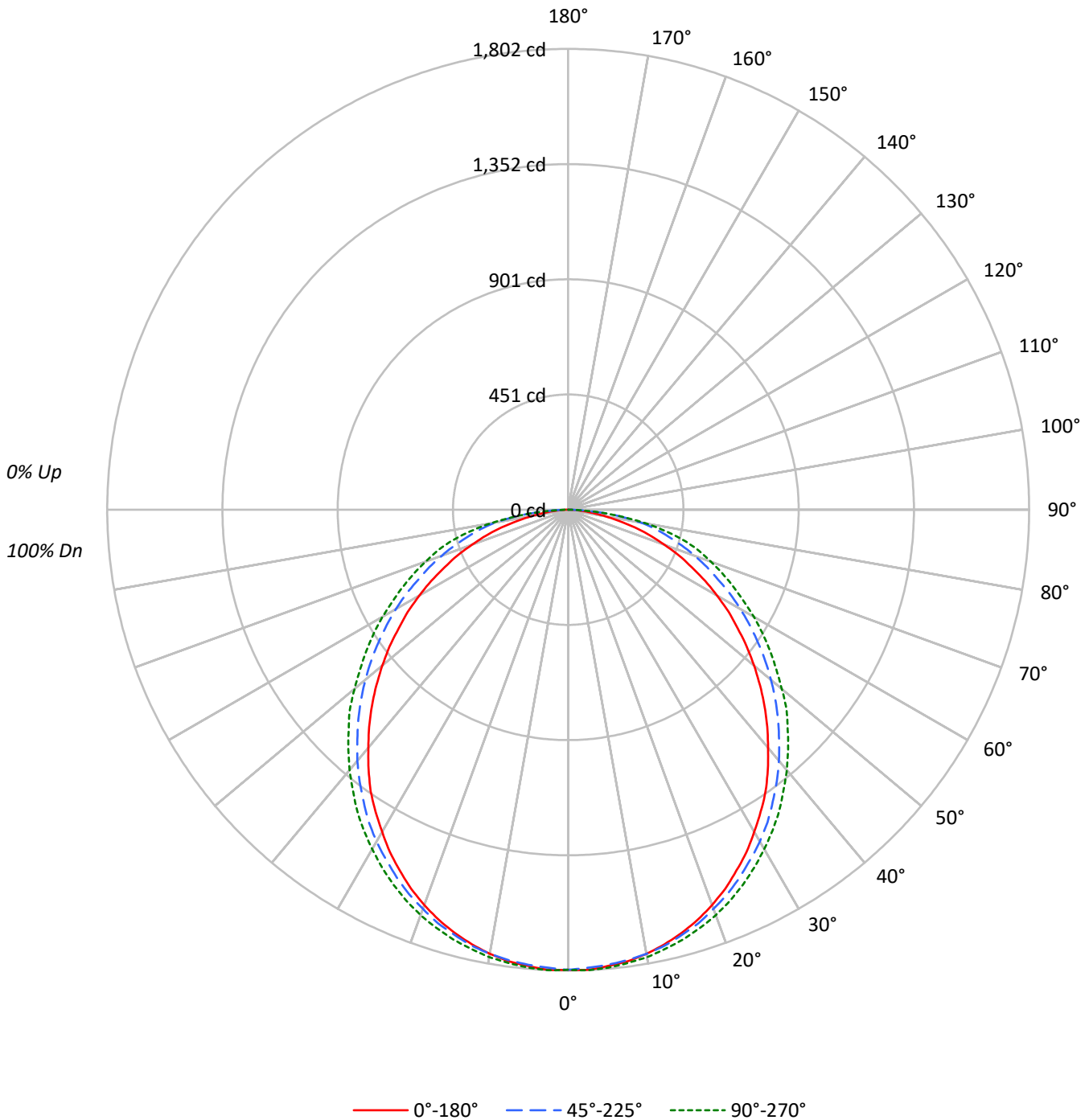
Input Watts (W): 38.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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	99	95	106	101	97	93	97	93	90	93	90	88	89	87	85	83					83			
2	98	90	83	77	96	88	81	76	84	79	74	81	76	72	78	74	71	69					69			
3	89	79	70	64	87	77	69	63	74	67	62	71	66	61	69	64	60	58					58			
4	82	70	61	54	80	68	60	54	66	59	53	63	57	52	61	56	51	49					49			
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42					42			
6	70	56	47	40	68	55	47	40	53	46	40	52	45	40	50	44	39	37					37			
7	64	51	42	36	63	50	42	36	48	41	35	47	40	35	46	39	35	33					33			
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29					29			
9	56	43	34	29	55	42	34	29	41	34	28	40	33	28	39	33	28	26					26			
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24					24			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2421	2421	2421
5°	2419	2412	2428
10°	2409	2409	2427
15°	2386	2398	2422
20°	2355	2378	2416
25°	2311	2355	2401
30°	2260	2328	2381
35°	2210	2290	2362
40°	2134	2252	2334
45°	2065	2207	2309
50°	1985	2166	2282
55°	1897	2126	2259
60°	1808	2093	2255
65°	1694	2056	2268
70°	1568	2067	2330
75°	1404	2106	2461
80°	1134	2231	2407
85°	854	1959	1908



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	170.3	3.3
10°-20°	486.7	9.5
20°-30°	731.6	14.3
30°-40°	871.5	17.0
40°-50°	891.9	17.4
50°-60°	803.0	15.7
60°-70°	630.6	12.3
70°-80°	409.3	8.0
80°-90°	126.6	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°	1388.7	27.1
0°-40°	2260.2	44.1
0°-60°	3955.1	77.2
0°-90°	5121.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5121.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1799	1799	1799	1799	1799	
5°	1791	1794	1786	1796	1798	170
15°	1713	1718	1721	1736	1739	483
25°	1557	1570	1586	1612	1617	717
35°	1345	1362	1394	1428	1438	839
45°	1085	1111	1160	1204	1214	837
55°	808	844	906	953	963	725
65°	532	573	646	700	712	530
75°	270	322	405	460	473	286
85°	55	102	127	124	124	67
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1799.3	1799.3	1799.3	1799.3	1799.3
2.5°	1800.9	1800.9	1792.7	1800.9	1802.5
5°	1791.1	1794.4	1786.2	1796.0	1797.6
7.5°	1781.4	1781.4	1776.5	1786.2	1787.9
10°	1763.5	1765.1	1763.5	1774.8	1776.5
12.5°	1740.7	1743.9	1745.6	1757.0	1758.6
15°	1713.0	1717.9	1721.2	1735.8	1739.1
17.5°	1682.1	1687.0	1695.1	1711.4	1714.7
20°	1644.7	1651.2	1661.0	1682.1	1687.0
22.5°	1604.0	1610.5	1626.8	1646.3	1654.5
25°	1556.9	1569.9	1586.1	1612.2	1617.0
27.5°	1509.7	1521.1	1542.2	1569.9	1576.4
30°	1454.4	1472.3	1498.3	1525.9	1532.5
32.5°	1400.7	1418.6	1449.5	1478.8	1486.9
35°	1345.4	1361.6	1394.2	1428.3	1438.1
37.5°	1281.9	1303.1	1338.9	1373.0	1382.8
40°	1215.2	1241.3	1281.9	1317.7	1329.1
42.5°	1151.8	1179.4	1220.1	1259.2	1272.2
45°	1085.1	1111.1	1159.9	1203.8	1213.6
47.5°	1016.8	1046.0	1098.1	1142.0	1158.3
50°	948.4	979.3	1034.7	1080.2	1090.0
52.5°	880.1	912.6	971.2	1020.0	1024.9
55°	808.5	844.3	906.1	953.3	963.1
57.5°	743.5	774.4	841.1	889.9	901.3
60°	671.9	706.0	777.6	823.2	837.8
62.5°	603.5	639.3	714.2	759.7	772.7
65°	532.0	572.6	645.8	699.5	712.5
67.5°	470.1	509.2	587.3	639.3	652.4
70°	398.6	442.5	525.5	579.1	592.2
72.5°	336.7	382.3	465.3	517.3	536.8
75°	270.1	322.1	405.1	460.4	473.4
77.5°	205.0	265.2	349.8	392.1	392.1
80°	146.4	209.9	287.9	307.5	310.7
82.5°	96.0	157.8	213.1	211.5	211.5
85°	55.3	102.5	126.9	123.6	123.6
87.5°	21.1	42.3	45.6	45.6	43.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)