

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: P389185

Luminaire Tested: **24CZ2-90VHE-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: P389185
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: 24CZ2-90VHE-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: 7084.5 lumens
Efficiency: N/A
Efficacy: 114.6 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

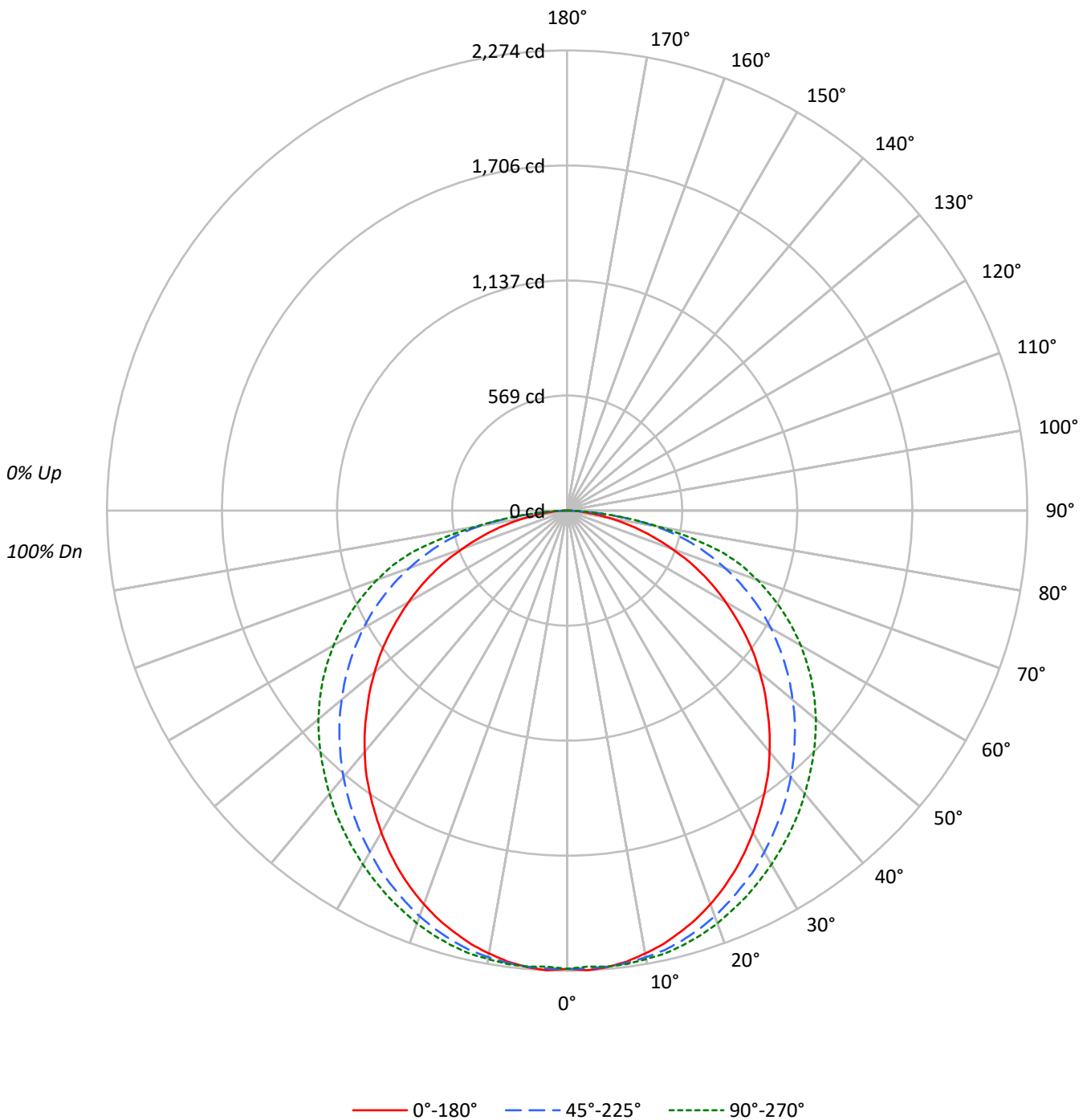
Input Watts (W): 61.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	3047	3047	3047
5°	3059	3055	3055
10°	3036	3062	3075
15°	3004	3063	3096
20°	2964	3055	3109
25°	2914	3039	3119
30°	2853	3028	3137
35°	2794	3020	3166
40°	2732	3020	3209
45°	2662	3027	3272
50°	2600	3046	3359
55°	2524	3079	3463
60°	2436	3129	3588
65°	2331	3188	3739
70°	2163	3267	3930
75°	1958	3381	4111
80°	1650	3390	3535
85°	1264	2564	2564



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	215.0	3.0
10°-20°	618.5	8.7
20°-30°	939.4	13.3
30°-40°	1142.6	16.1
40°-50°	1216.5	17.2
50°-60°	1158.7	16.4
60°-70°	969.0	13.7
70°-80°	646.1	9.1
80°-90°	178.8	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°	1772.8	25.0
0°-40°	2915.4	41.2
0°-60°	5290.7	74.7
0°-90°	7084.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7084.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2265	2265	2265	2265	2265	
5°	2265	2250	2262	2262	2262	215
15°	2157	2162	2199	2215	2222	608
25°	1963	1988	2047	2082	2101	904
35°	1701	1750	1839	1900	1928	1064
45°	1399	1474	1591	1680	1720	1081
55°	1076	1170	1312	1427	1476	962
65°	732	840	1001	1125	1174	723
75°	377	496	650	760	791	399
85°	82	152	166	164	166	99
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2264.6	2264.6	2264.6	2264.6	2264.6
2.5°	2273.9	2257.5	2264.6	2264.6	2255.2
5°	2264.6	2250.5	2262.2	2262.2	2262.2
7.5°	2248.2	2236.5	2255.2	2259.9	2259.9
10°	2222.4	2217.8	2241.2	2248.2	2250.5
12.5°	2194.4	2192.0	2224.8	2234.1	2241.2
15°	2156.9	2161.6	2199.0	2215.4	2222.4
17.5°	2117.2	2126.5	2168.6	2192.0	2199.0
20°	2070.4	2084.4	2133.5	2156.9	2171.0
22.5°	2018.9	2040.0	2091.4	2119.5	2135.9
25°	1962.8	1988.5	2047.0	2082.1	2100.8
27.5°	1901.9	1934.7	2002.5	2042.3	2061.0
30°	1836.4	1873.9	1948.7	1995.5	2018.9
32.5°	1768.6	1813.0	1894.9	1946.4	1974.5
35°	1700.8	1749.9	1838.8	1899.6	1927.7
37.5°	1632.9	1682.0	1780.3	1845.8	1880.9
40°	1555.7	1614.2	1719.5	1792.0	1827.1
42.5°	1480.8	1544.0	1656.3	1735.8	1773.3
45°	1399.0	1473.8	1590.8	1679.7	1719.5
47.5°	1324.1	1399.0	1525.3	1618.9	1663.3
50°	1242.2	1321.8	1455.1	1558.0	1604.8
52.5°	1162.7	1244.6	1384.9	1494.9	1541.7
55°	1076.1	1169.7	1312.4	1427.0	1476.2
57.5°	989.6	1090.2	1237.5	1356.9	1406.0
60°	905.4	1008.3	1162.7	1282.0	1333.5
62.5°	821.1	924.1	1085.5	1207.1	1256.3
65°	732.2	839.8	1001.3	1125.3	1174.4
67.5°	643.3	755.6	917.0	1041.0	1087.8
70°	549.8	669.1	830.5	952.1	998.9
72.5°	463.2	582.5	741.6	860.9	905.4
75°	376.6	496.0	650.4	760.3	790.7
77.5°	292.4	411.7	549.8	622.3	629.3
80°	212.9	325.2	437.5	458.5	456.2
82.5°	142.7	243.3	301.8	304.1	311.1
85°	81.9	152.1	166.1	163.8	166.1
87.5°	32.8	53.8	46.8	35.1	35.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)