

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: P389040

Luminaire Tested: **24CZ2-70HE-SQR-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: P389040
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: 24CZ2-70HE-SQR-UNV-L930-CD1-SDWPD1-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: 5425.7 lumens
Efficiency: N/A
Efficacy: 106.4 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

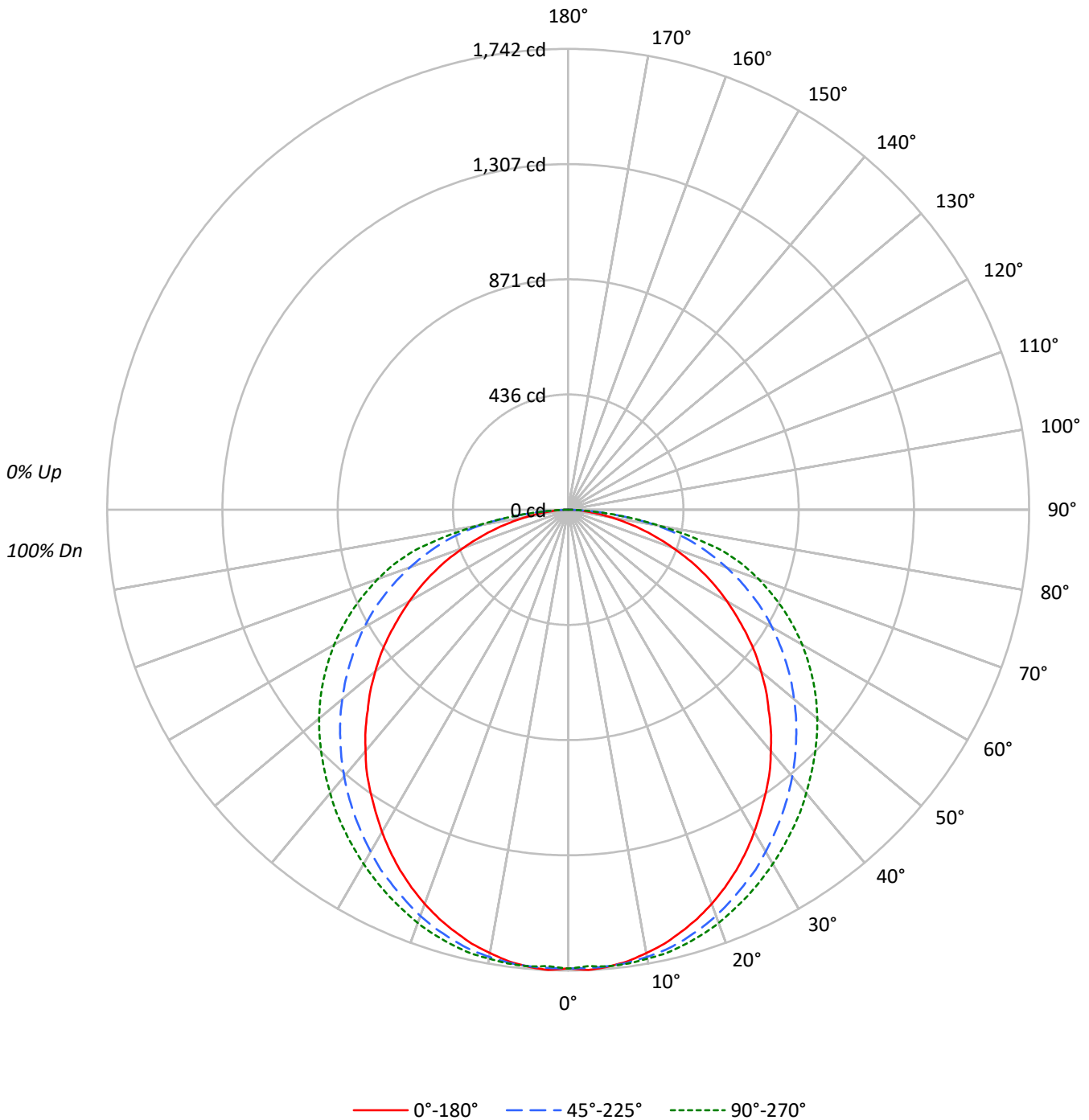
Input Watts (W): 51
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2333	2333	2333
5°	2342	2340	2340
10°	2325	2345	2355
15°	2301	2346	2371
20°	2270	2340	2381
25°	2232	2327	2389
30°	2185	2319	2402
35°	2139	2313	2425
40°	2093	2313	2458
45°	2039	2318	2506
50°	1991	2333	2573
55°	1933	2358	2652
60°	1866	2396	2748
65°	1785	2441	2863
70°	1656	2502	3009
75°	1500	2589	3148
80°	1263	2596	2707
85°	968	1964	1964



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	164.6	3.0
10°-20°	473.7	8.7
20°-30°	719.4	13.3
30°-40°	875.1	16.1
40°-50°	931.7	17.2
50°-60°	887.4	16.4
60°-70°	742.1	13.7
70°-80°	494.8	9.1
80°-90°	136.9	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°	1357.7	25.0
0°-40°	2232.8	41.2
0°-60°	4051.9	74.7
0°-90°	5425.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5425.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1734	1734	1734	1734	1734	
5°	1734	1724	1732	1732	1732	165
15°	1652	1656	1684	1697	1702	466
25°	1503	1523	1568	1595	1609	692
35°	1302	1340	1408	1455	1476	815
45°	1071	1129	1218	1286	1317	828
55°	824	896	1005	1093	1130	737
65°	561	643	767	862	899	554
75°	288	380	498	582	606	306
85°	63	116	127	125	127	76
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1734.3	1734.3	1734.3	1734.3	1734.3
2.5°	1741.5	1728.9	1734.3	1734.3	1727.2
5°	1734.3	1723.6	1732.5	1732.5	1732.5
7.5°	1721.8	1712.8	1727.2	1730.7	1730.7
10°	1702.1	1698.5	1716.4	1721.8	1723.6
12.5°	1680.6	1678.8	1703.9	1711.0	1716.4
15°	1651.9	1655.5	1684.2	1696.7	1702.1
17.5°	1621.4	1628.6	1660.9	1678.8	1684.2
20°	1585.6	1596.4	1634.0	1651.9	1662.7
22.5°	1546.2	1562.3	1601.7	1623.2	1635.8
25°	1503.2	1522.9	1567.7	1594.6	1608.9
27.5°	1456.6	1481.7	1533.7	1564.1	1578.4
30°	1406.4	1435.1	1492.4	1528.3	1546.2
32.5°	1354.5	1388.5	1451.2	1490.7	1512.2
35°	1302.5	1340.2	1408.2	1454.8	1476.3
37.5°	1250.6	1288.2	1363.4	1413.6	1440.5
40°	1191.4	1236.2	1316.9	1372.4	1399.3
42.5°	1134.1	1182.5	1268.5	1329.4	1358.1
45°	1071.4	1128.7	1218.3	1286.4	1316.9
47.5°	1014.1	1071.4	1168.2	1239.8	1273.9
50°	951.4	1012.3	1114.4	1193.2	1229.1
52.5°	890.5	953.2	1060.7	1144.9	1180.7
55°	824.2	895.8	1005.1	1092.9	1130.5
57.5°	757.9	834.9	947.8	1039.2	1076.8
60°	693.4	772.2	890.5	981.8	1021.2
62.5°	628.9	707.7	831.3	924.5	962.1
65°	560.8	643.2	766.8	861.8	899.4
67.5°	492.7	578.7	702.3	797.3	833.1
70°	421.0	512.4	636.0	729.2	765.0
72.5°	354.7	446.1	568.0	659.3	693.4
75°	288.5	379.8	498.1	582.3	605.6
77.5°	224.0	315.3	421.0	476.6	482.0
80°	163.0	249.0	335.0	351.2	349.4
82.5°	109.3	186.3	231.1	232.9	238.3
85°	62.7	116.5	127.2	125.4	127.2
87.5°	25.1	41.2	35.8	26.9	26.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)