

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: P389043

Luminaire Tested: **24CZ2-70HE-SQR-UNV-L935-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: P389043
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-L935-CD1-SDWPD1-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: 5559.9 lumens
Efficiency: N/A
Efficacy: 109.0 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

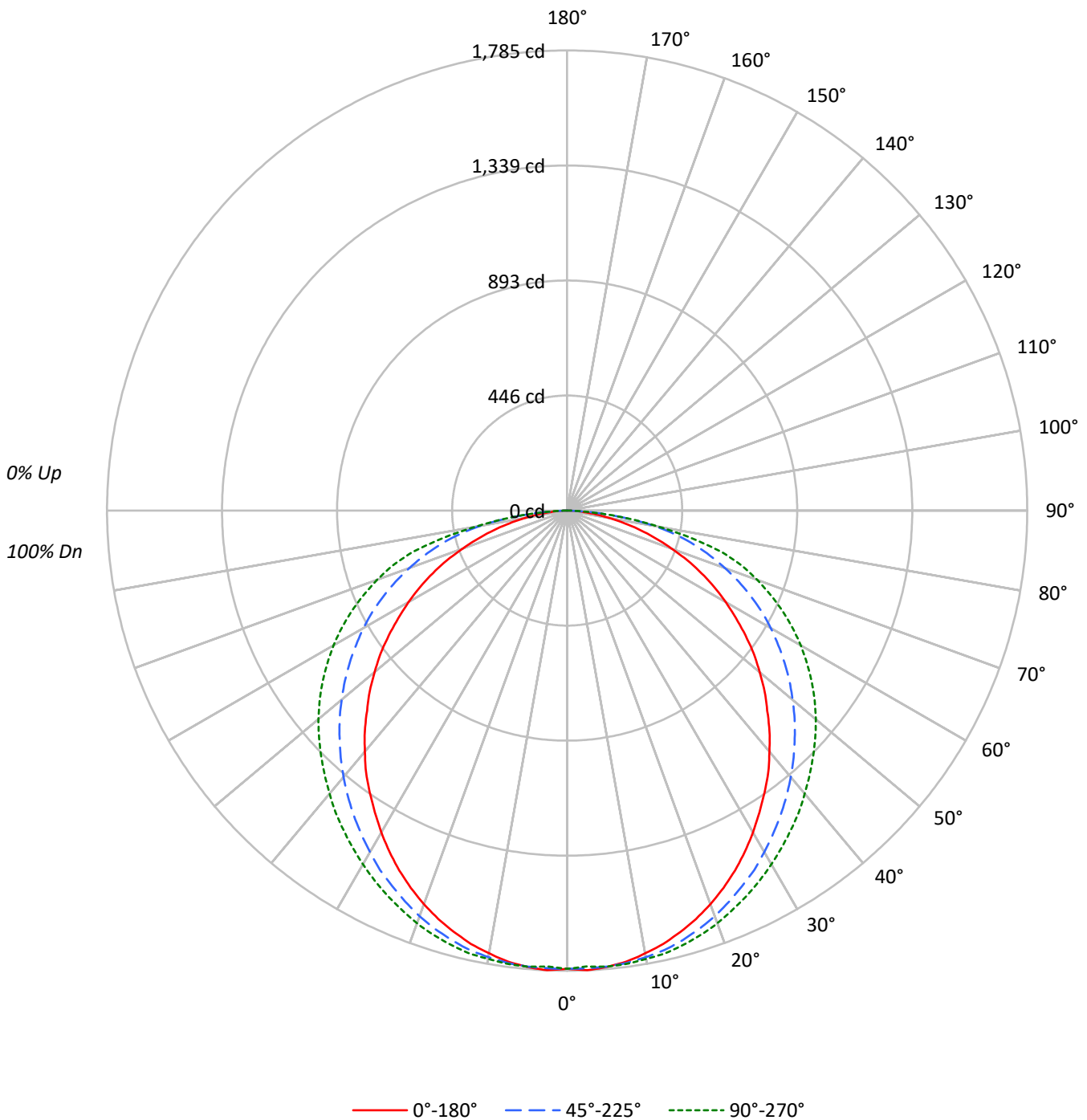
Input Watts (W): 51
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2391	2391	2391
5°	2400	2398	2398
10°	2383	2403	2413
15°	2358	2404	2430
20°	2326	2397	2440
25°	2287	2385	2448
30°	2239	2376	2462
35°	2192	2370	2485
40°	2144	2370	2519
45°	2089	2376	2568
50°	2041	2390	2636
55°	1981	2416	2718
60°	1912	2456	2816
65°	1830	2502	2934
70°	1697	2564	3084
75°	1537	2653	3226
80°	1295	2660	2774
85°	993	2013	2013



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	168.7	3.0
10°-20°	485.4	8.7
20°-30°	737.2	13.3
30°-40°	896.7	16.1
40°-50°	954.7	17.2
50°-60°	909.3	16.4
60°-70°	760.5	13.7
70°-80°	507.0	9.1
80°-90°	140.3	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°	1391.3	25.0
0°-40°	2288.0	41.2
0°-60°	4152.1	74.7
0°-90°	5559.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5559.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1777	1777	1777	1777	1777	
5°	1777	1766	1775	1775	1775	169
15°	1693	1696	1726	1739	1744	477
25°	1540	1561	1606	1634	1649	709
35°	1335	1373	1443	1491	1513	835
45°	1098	1157	1248	1318	1349	849
55°	844	918	1030	1120	1158	755
65°	575	659	786	883	922	568
75°	296	389	510	597	621	313
85°	64	119	130	128	130	78
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1777.2	1777.2	1777.2	1777.2	1777.2
2.5°	1784.6	1771.7	1777.2	1777.2	1769.9
5°	1777.2	1766.2	1775.4	1775.4	1775.4
7.5°	1764.4	1755.2	1769.9	1773.5	1773.5
10°	1744.2	1740.5	1758.9	1764.4	1766.2
12.5°	1722.1	1720.3	1746.0	1753.3	1758.9
15°	1692.8	1696.4	1725.8	1738.7	1744.2
17.5°	1661.5	1668.9	1701.9	1720.3	1725.8
20°	1624.8	1635.8	1674.4	1692.8	1703.8
22.5°	1584.4	1601.0	1641.4	1663.4	1676.2
25°	1540.4	1560.6	1606.5	1634.0	1648.7
27.5°	1492.6	1518.3	1571.6	1602.8	1617.5
30°	1441.2	1470.6	1529.4	1566.1	1584.4
32.5°	1388.0	1422.9	1487.1	1527.5	1549.6
35°	1334.7	1373.3	1443.1	1490.8	1512.8
37.5°	1281.5	1320.1	1397.2	1448.6	1476.1
40°	1220.9	1266.8	1349.4	1406.3	1433.9
42.5°	1162.2	1211.7	1299.9	1362.3	1391.7
45°	1097.9	1156.7	1248.5	1318.2	1349.4
47.5°	1039.2	1097.9	1197.0	1270.5	1305.4
50°	974.9	1037.3	1142.0	1222.8	1259.5
52.5°	912.5	976.7	1086.9	1173.2	1209.9
55°	844.5	918.0	1030.0	1119.9	1158.5
57.5°	776.6	855.6	971.2	1064.9	1103.4
60°	710.5	791.3	912.5	1006.1	1046.5
62.5°	644.4	725.2	851.9	947.4	985.9
65°	574.7	659.1	785.8	883.1	921.7
67.5°	504.9	593.0	719.7	817.0	853.7
70°	431.5	525.1	651.8	747.2	784.0
72.5°	363.5	457.2	582.0	675.6	710.5
75°	295.6	389.2	510.4	596.7	620.6
77.5°	229.5	323.1	431.5	488.4	493.9
80°	167.1	255.2	343.3	359.8	358.0
82.5°	112.0	190.9	236.8	238.7	244.2
85°	64.3	119.3	130.4	128.5	130.4
87.5°	25.7	42.2	36.7	27.5	27.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)