

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: P389047

Luminaire Tested: **24CZ2-70HE-SQR-UNV-L940-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: P389047
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-L940-CD1-SWPD1-U
Description: 2x4 CRUZE LED TROFFER WITH 4000K, 90 LEDS, AND SQUARE LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5686.0 lumens
Efficiency: N/A
Efficacy: 111.5 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

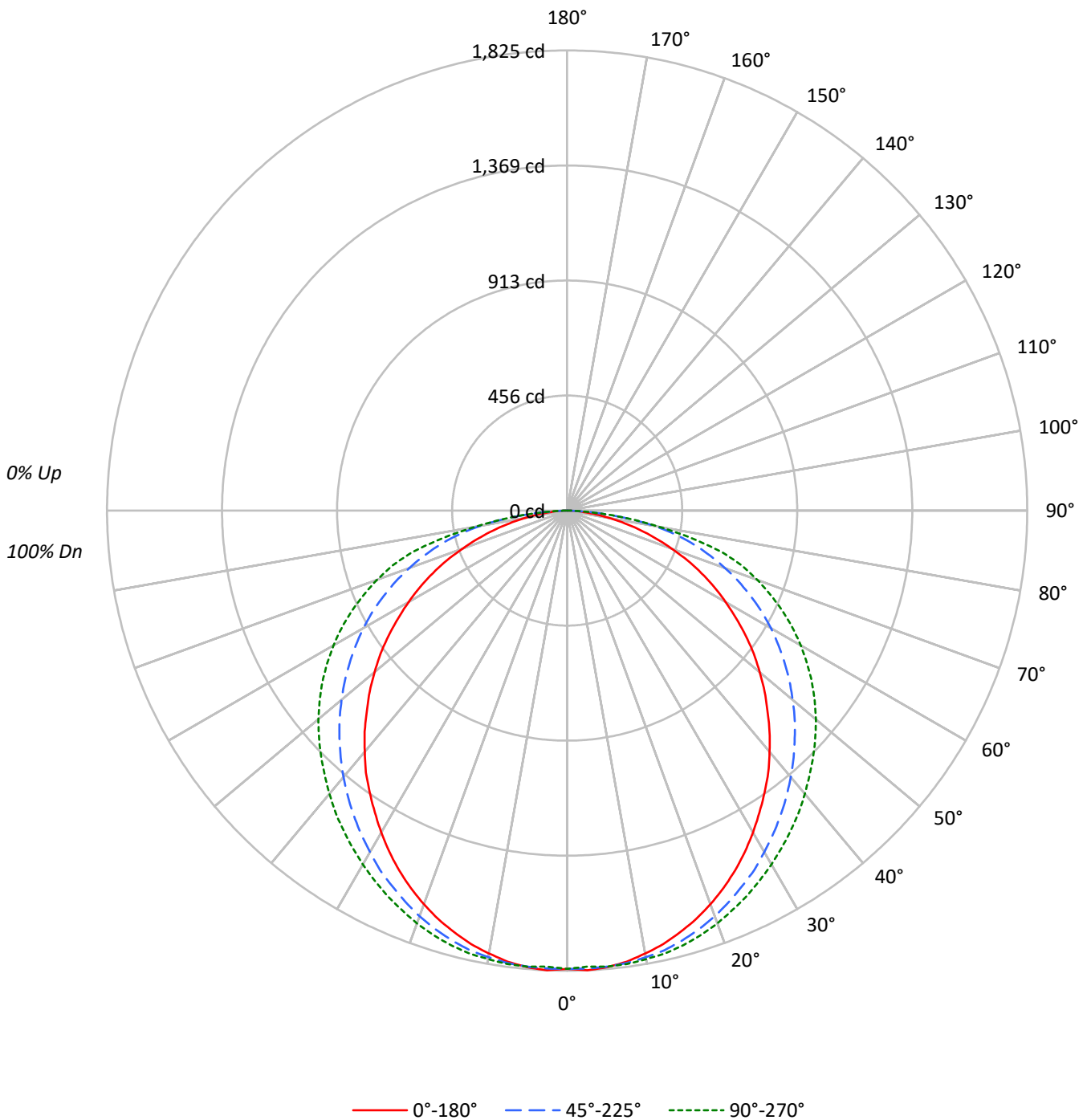
Input Watts (W): 51
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20			20				20			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
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°	2445	2445	2445
5°	2455	2452	2452
10°	2437	2457	2468
15°	2411	2458	2485
20°	2379	2452	2495
25°	2339	2439	2503
30°	2290	2430	2518
35°	2242	2424	2541
40°	2193	2424	2576
45°	2136	2430	2626
50°	2087	2445	2696
55°	2026	2471	2779
60°	1955	2511	2880
65°	1871	2558	3001
70°	1736	2622	3154
75°	1572	2714	3299
80°	1324	2720	2837
85°	1014	2058	2058



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	172.5	3.0
10°-20°	496.4	8.7
20°-30°	754.0	13.3
30°-40°	917.1	16.1
40°-50°	976.4	17.2
50°-60°	930.0	16.4
60°-70°	777.7	13.7
70°-80°	518.5	9.1
80°-90°	143.5	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°	1422.8	25.0
0°-40°	2339.9	41.2
0°-60°	4246.3	74.7
0°-90°	5686.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5686.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1818	1818	1818	1818	1818	
5°	1818	1806	1816	1816	1816	172
15°	1731	1735	1765	1778	1784	488
25°	1575	1596	1643	1671	1686	725
35°	1365	1404	1476	1525	1547	854
45°	1123	1183	1277	1348	1380	868
55°	864	939	1053	1145	1185	772
65°	588	674	804	903	943	581
75°	302	398	522	610	635	320
85°	66	122	133	131	133	79
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1817.5	1817.5	1817.5	1817.5	1817.5
2.5°	1825.0	1811.9	1817.5	1817.5	1810.0
5°	1817.5	1806.3	1815.6	1815.6	1815.6
7.5°	1804.4	1795.0	1810.0	1813.8	1813.8
10°	1783.7	1780.0	1798.7	1804.4	1806.3
12.5°	1761.2	1759.3	1785.6	1793.1	1798.7
15°	1731.2	1734.9	1764.9	1778.1	1783.7
17.5°	1699.2	1706.7	1740.5	1759.3	1764.9
20°	1661.7	1672.9	1712.4	1731.2	1742.4
22.5°	1620.4	1637.3	1678.6	1701.1	1714.3
25°	1575.3	1596.0	1642.9	1671.1	1686.1
27.5°	1526.5	1552.8	1607.2	1639.1	1654.2
30°	1473.9	1504.0	1564.0	1601.6	1620.4
32.5°	1419.5	1455.1	1520.9	1562.2	1584.7
35°	1365.0	1404.4	1475.8	1524.6	1547.1
37.5°	1310.6	1350.0	1428.9	1481.4	1509.6
40°	1248.6	1295.5	1380.0	1438.2	1466.4
42.5°	1188.5	1239.2	1329.3	1393.2	1423.2
45°	1122.8	1182.9	1276.8	1348.1	1380.0
47.5°	1062.7	1122.8	1224.2	1299.3	1335.0
50°	997.0	1060.8	1167.9	1250.5	1288.0
52.5°	933.2	998.9	1111.5	1199.8	1237.3
55°	863.7	938.8	1053.3	1145.3	1184.8
57.5°	794.2	875.0	993.3	1089.0	1128.4
60°	726.6	809.2	933.2	1028.9	1070.2
62.5°	659.0	741.7	871.2	968.8	1008.3
65°	587.7	674.1	803.6	903.1	942.6
67.5°	516.3	606.5	736.0	835.5	873.1
70°	441.2	537.0	666.6	764.2	801.7
72.5°	371.8	467.5	595.2	691.0	726.6
75°	302.3	398.1	522.0	610.2	634.6
77.5°	234.7	330.5	441.2	499.4	505.1
80°	170.9	261.0	351.1	368.0	366.1
82.5°	114.5	195.3	242.2	244.1	249.7
85°	65.7	122.0	133.3	131.4	133.3
87.5°	26.3	43.2	37.6	28.2	28.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)