

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: P389026

Luminaire Tested: **24CZ2-65VHE-SQR-UNV-L950-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: P389026
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: 24CZ2-65VHE-SQR-UNV-L950-CD1-SWPD1-U
Description: 2x4 CRUZE LED TROFFER WITH 5000K, 90 LEDS, AND SQUARE LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5645.8 lumens
Efficiency: N/A
Efficacy: 133.8 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

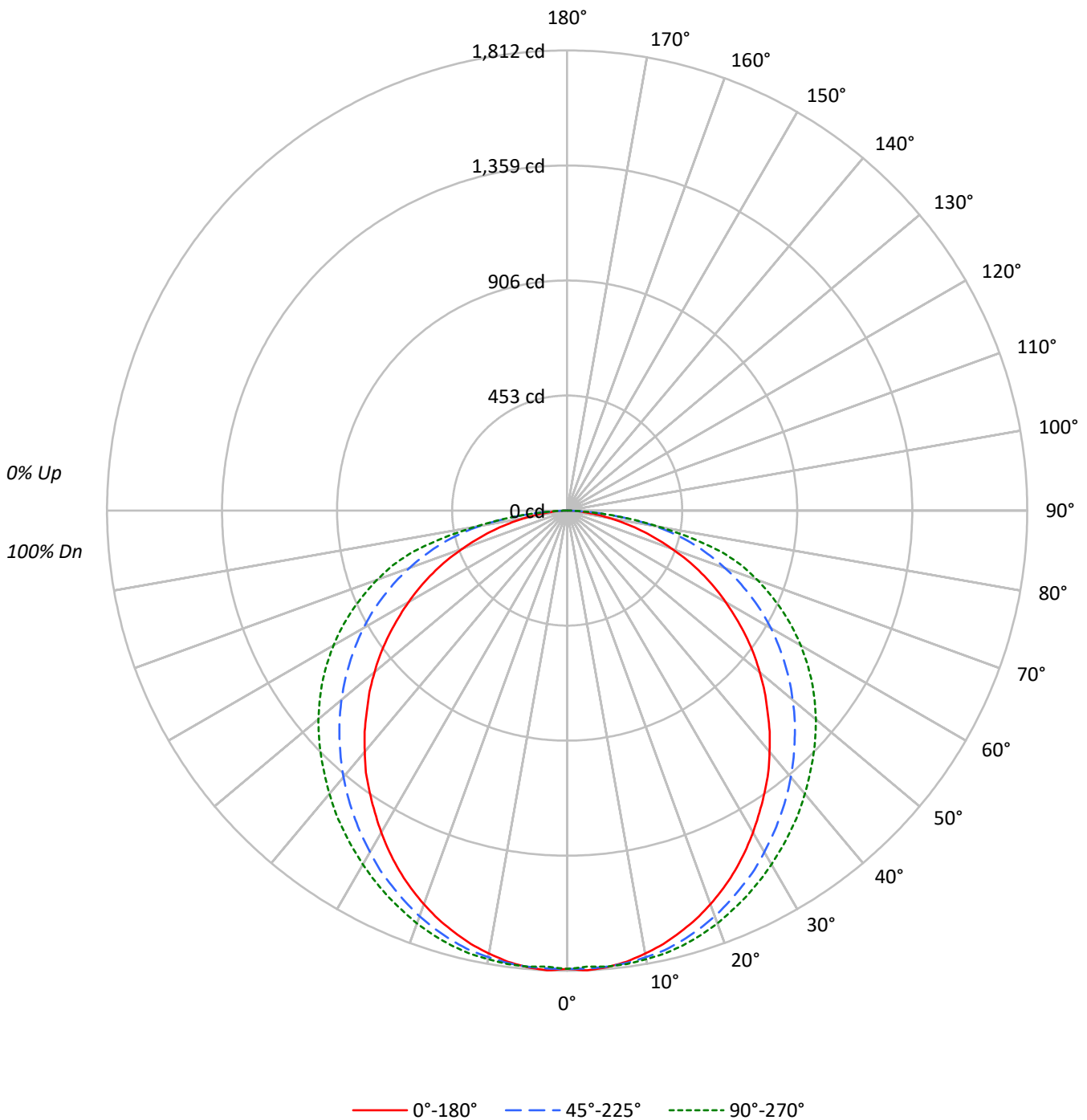
Input Watts (W): 42.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2428	2428	2428
5°	2437	2435	2435
10°	2420	2440	2450
15°	2394	2441	2467
20°	2362	2435	2477
25°	2322	2422	2485
30°	2274	2413	2500
35°	2226	2407	2523
40°	2178	2407	2557
45°	2121	2412	2607
50°	2072	2427	2677
55°	2012	2453	2760
60°	1942	2493	2860
65°	1858	2540	2980
70°	1723	2603	3132
75°	1561	2694	3276
80°	1315	2701	2817
85°	1008	2044	2044



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	171.3	3.0
10°-20°	492.9	8.7
20°-30°	748.6	13.3
30°-40°	910.6	16.1
40°-50°	969.5	17.2
50°-60°	923.4	16.4
60°-70°	772.2	13.7
70°-80°	514.8	9.1
80°-90°	142.5	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°	1412.8	25.0
0°-40°	2323.4	41.2
0°-60°	4216.3	74.7
0°-90°	5645.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5645.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1805	1805	1805	1805	1805	
5°	1805	1794	1803	1803	1803	171
15°	1719	1723	1752	1766	1771	485
25°	1564	1585	1631	1659	1674	720
35°	1355	1394	1465	1514	1536	848
45°	1115	1174	1268	1339	1370	862
55°	858	932	1046	1137	1176	767
65°	584	669	798	897	936	577
75°	300	395	518	606	630	318
85°	65	121	132	130	132	79
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1804.7	1804.7	1804.7	1804.7	1804.7
2.5°	1812.1	1799.1	1804.7	1804.7	1797.2
5°	1804.7	1793.5	1802.8	1802.8	1802.8
7.5°	1791.6	1782.3	1797.2	1800.9	1800.9
10°	1771.1	1767.4	1786.0	1791.6	1793.5
12.5°	1748.7	1746.9	1773.0	1780.4	1786.0
15°	1718.9	1722.6	1752.5	1765.5	1771.1
17.5°	1687.2	1694.7	1728.2	1746.9	1752.5
20°	1649.9	1661.1	1700.3	1718.9	1730.1
22.5°	1608.9	1625.7	1666.7	1689.1	1702.1
25°	1564.2	1584.7	1631.3	1659.3	1674.2
27.5°	1515.7	1541.8	1595.9	1627.6	1642.5
30°	1463.5	1493.3	1553.0	1590.3	1608.9
32.5°	1409.4	1444.9	1510.1	1551.1	1573.5
35°	1355.4	1394.5	1465.4	1513.8	1536.2
37.5°	1301.3	1340.5	1418.8	1471.0	1498.9
40°	1239.8	1286.4	1370.3	1428.1	1456.0
42.5°	1180.1	1230.5	1319.9	1383.3	1413.2
45°	1114.9	1174.5	1267.7	1338.6	1370.3
47.5°	1055.2	1114.9	1215.5	1290.1	1325.5
50°	990.0	1053.3	1159.6	1241.6	1278.9
52.5°	926.6	991.8	1103.7	1191.3	1228.6
55°	857.6	932.2	1045.9	1137.2	1176.4
57.5°	788.6	868.8	986.2	1081.3	1120.5
60°	721.5	803.5	926.6	1021.7	1062.7
62.5°	654.4	736.4	865.0	962.0	1001.1
65°	583.5	669.3	797.9	896.7	935.9
67.5°	512.7	602.2	730.8	829.6	866.9
70°	438.1	533.2	661.8	758.8	796.1
72.5°	369.1	464.2	591.0	686.1	721.5
75°	300.2	395.2	518.3	605.9	630.1
77.5°	233.0	328.1	438.1	495.9	501.5
80°	169.7	259.1	348.6	365.4	363.5
82.5°	113.7	193.9	240.5	242.4	248.0
85°	65.3	121.2	132.4	130.5	132.4
87.5°	26.1	42.9	37.3	28.0	28.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)