

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: P389020

Luminaire Tested: **24CZ2-65VHE-SQR-UNV-L935-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: P389020  
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-L935-CD1-SWPD1-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: 5264.5 lumens  
Efficiency: N/A  
Efficacy: 124.8 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

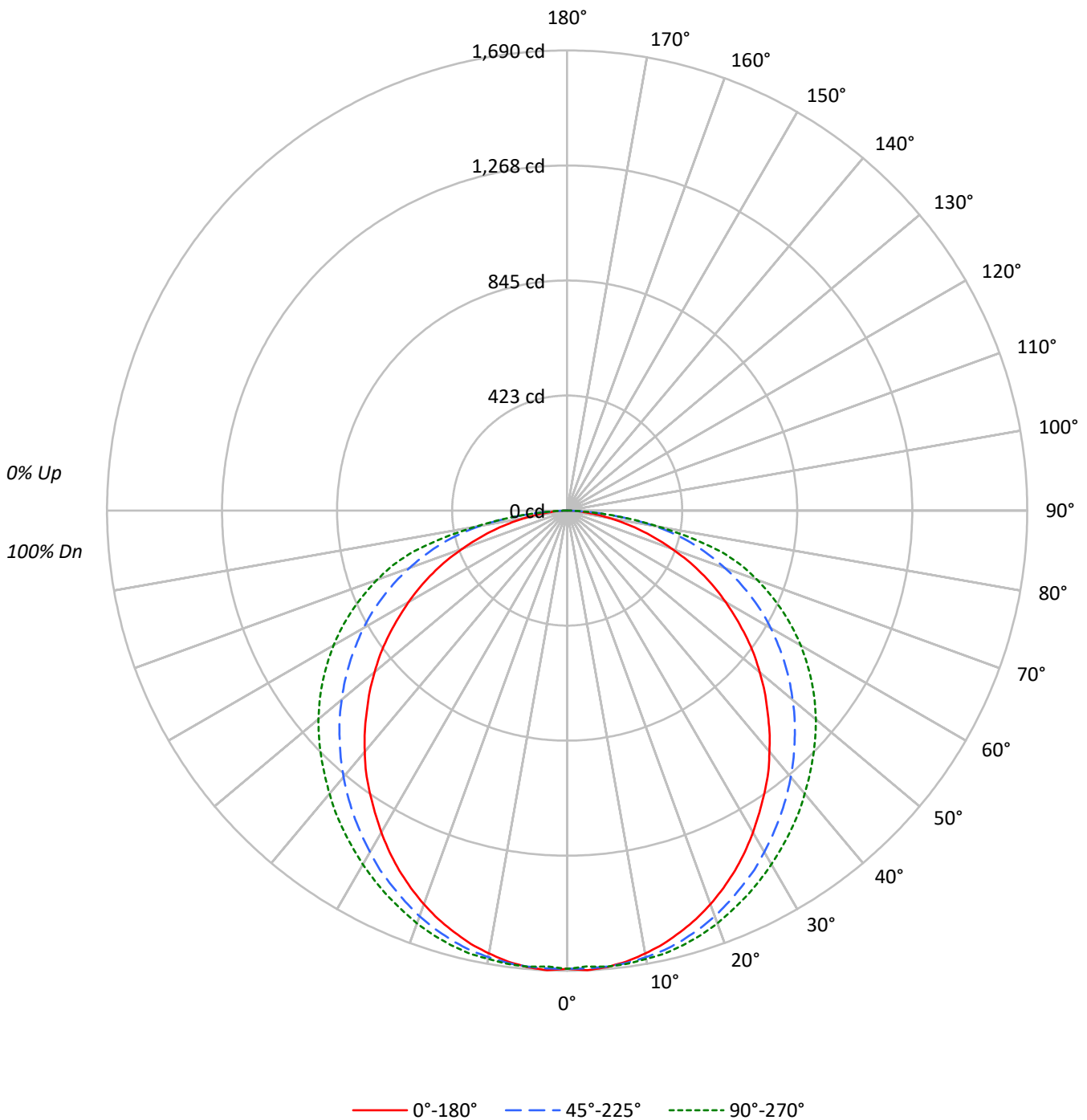
Input Watts (W): 42.2  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	2264	2264	2264
5°	2273	2271	2271
10°	2256	2275	2285
15°	2233	2276	2300
20°	2203	2270	2310
25°	2165	2258	2318
30°	2120	2250	2331
35°	2076	2244	2353
40°	2030	2244	2385
45°	1978	2249	2431
50°	1932	2263	2496
55°	1876	2288	2573
60°	1810	2325	2666
65°	1732	2369	2778
70°	1607	2428	2920
75°	1455	2512	3055
80°	1226	2519	2627
85°	939	1905	1905



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	159.7	3.0
10°-20°	459.6	8.7
20°-30°	698.1	13.3
30°-40°	849.1	16.1
40°-50°	904.0	17.2
50°-60°	861.0	16.4
60°-70°	720.1	13.7
70°-80°	480.1	9.1
80°-90°	132.8	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°	1317.4	25.0
0°-40°	2166.5	41.2
0°-60°	3931.5	74.7
0°-90°	5264.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5264.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1683	1683	1683	1683	1683	
5°	1683	1672	1681	1681	1681	160
15°	1603	1606	1634	1646	1652	452
25°	1458	1478	1521	1547	1561	672
35°	1264	1300	1366	1412	1432	791
45°	1040	1095	1182	1248	1278	804
55°	800	869	975	1060	1097	715
65°	544	624	744	836	873	538
75°	280	368	483	565	588	296
85°	61	113	123	122	123	73
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1682.8	1682.8	1682.8	1682.8	1682.8
2.5°	1689.7	1677.6	1682.8	1682.8	1675.8
5°	1682.8	1672.4	1681.1	1681.1	1681.1
7.5°	1670.6	1661.9	1675.8	1679.3	1679.3
10°	1651.5	1648.0	1665.4	1670.6	1672.4
12.5°	1630.6	1628.9	1653.2	1660.2	1665.4
15°	1602.8	1606.3	1634.1	1646.3	1651.5
17.5°	1573.3	1580.2	1611.5	1628.9	1634.1
20°	1538.5	1548.9	1585.4	1602.8	1613.3
22.5°	1500.3	1515.9	1554.1	1575.0	1587.2
25°	1458.5	1477.7	1521.1	1547.2	1561.1
27.5°	1413.3	1437.7	1488.1	1517.6	1531.5
30°	1364.7	1392.5	1448.1	1482.9	1500.3
32.5°	1314.2	1347.3	1408.1	1446.4	1467.2
35°	1263.8	1300.3	1366.4	1411.6	1432.5
37.5°	1213.4	1249.9	1322.9	1371.6	1397.7
40°	1156.0	1199.5	1277.7	1331.6	1357.7
42.5°	1100.4	1147.4	1230.8	1289.9	1317.7
45°	1039.6	1095.2	1182.1	1248.2	1277.7
47.5°	983.9	1039.6	1133.4	1203.0	1236.0
50°	923.1	982.2	1081.3	1157.8	1192.6
52.5°	864.0	924.8	1029.1	1110.9	1145.6
55°	799.7	869.2	975.3	1060.4	1096.9
57.5°	735.4	810.1	919.6	1008.3	1044.8
60°	672.8	749.3	864.0	952.7	990.9
62.5°	610.2	686.7	806.6	897.0	933.5
65°	544.1	624.1	744.0	836.2	872.7
67.5°	478.1	561.5	681.5	773.6	808.4
70°	408.5	497.2	617.1	707.5	742.3
72.5°	344.2	432.9	551.1	639.7	672.8
75°	279.9	368.5	483.3	565.0	587.6
77.5°	217.3	306.0	408.5	462.4	467.6
80°	158.2	241.6	325.1	340.7	339.0
82.5°	106.0	180.8	224.3	226.0	231.2
85°	60.8	113.0	123.4	121.7	123.4
87.5°	24.3	40.0	34.8	26.1	26.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)