

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: P388995

Luminaire Tested: **24CZ2-65HE-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: P388995  
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: 24CZ2-65HE-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: 5220.9 lumens  
Efficiency: N/A  
Efficacy: 106.8 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

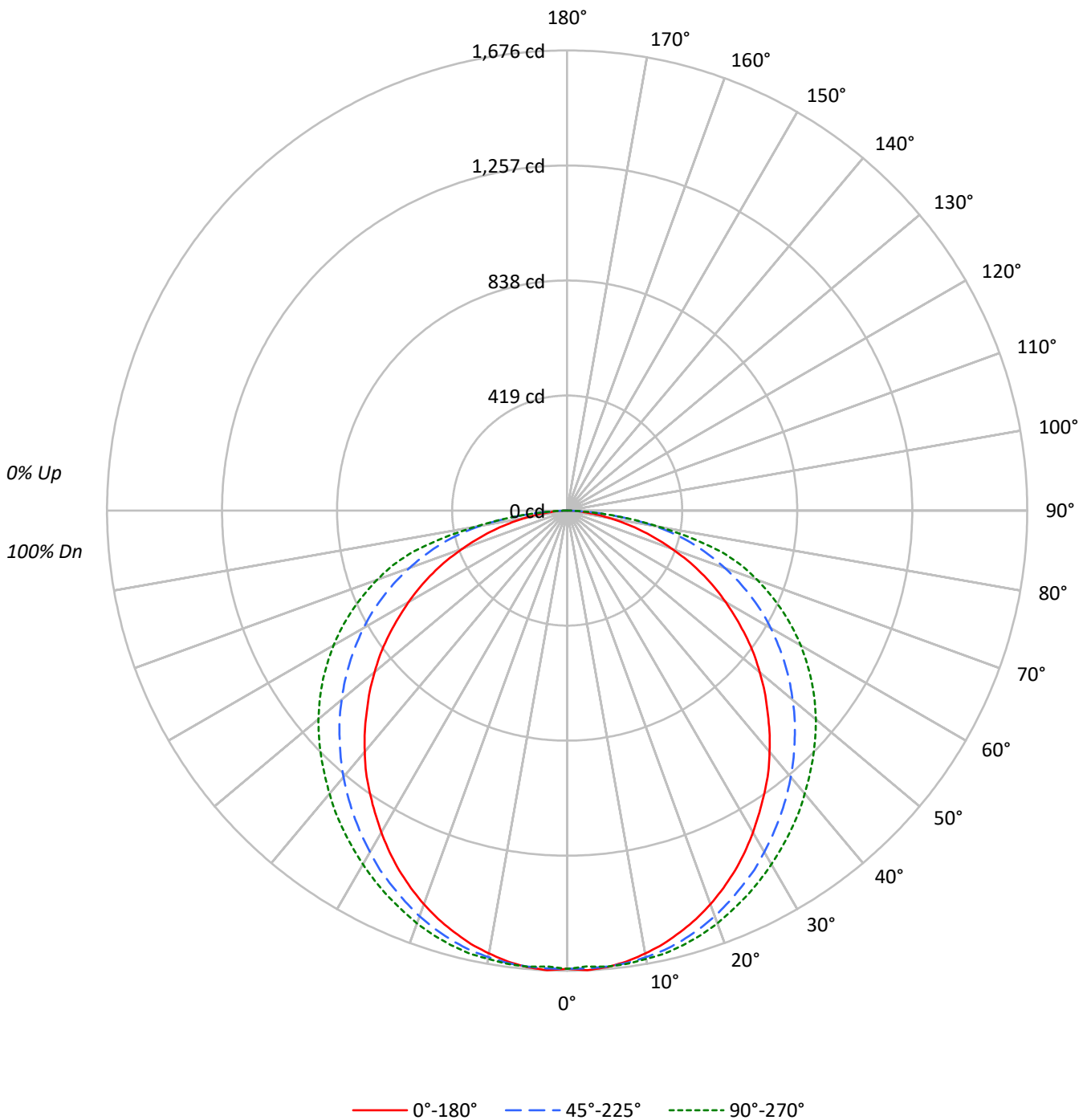
Input Watts (W): 48.9  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	2245	2245	2245
5°	2254	2252	2252
10°	2238	2256	2266
15°	2214	2257	2281
20°	2185	2251	2291
25°	2147	2239	2298
30°	2103	2231	2312
35°	2059	2226	2333
40°	2014	2226	2365
45°	1962	2231	2411
50°	1916	2245	2476
55°	1860	2269	2552
60°	1795	2306	2644
65°	1718	2349	2755
70°	1594	2408	2896
75°	1443	2492	3029
80°	1216	2498	2605
85°	931	1890	1890



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	158.4	3.0
10°-20°	455.8	8.7
20°-30°	692.3	13.3
30°-40°	842.1	16.1
40°-50°	896.5	17.2
50°-60°	853.9	16.4
60°-70°	714.1	13.7
70°-80°	476.1	9.1
80°-90°	131.7	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°	1306.5	25.0
0°-40°	2148.5	41.2
0°-60°	3899.0	74.7
0°-90°	5220.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5220.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1669	1669	1669	1669	1669	
5°	1669	1658	1667	1667	1667	158
15°	1590	1593	1621	1633	1638	448
25°	1446	1465	1508	1534	1548	666
35°	1253	1290	1355	1400	1421	784
45°	1031	1086	1172	1238	1267	797
55°	793	862	967	1052	1088	709
65°	540	619	738	829	866	533
75°	278	366	479	560	583	294
85°	60	112	122	121	122	73
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1668.9	1668.9	1668.9	1668.9	1668.9
2.5°	1675.7	1663.7	1668.9	1668.9	1662.0
5°	1668.9	1658.5	1667.1	1667.1	1667.1
7.5°	1656.8	1648.2	1662.0	1665.4	1665.4
10°	1637.8	1634.4	1651.6	1656.8	1658.5
12.5°	1617.1	1615.4	1639.5	1646.4	1651.6
15°	1589.5	1593.0	1620.6	1632.6	1637.8
17.5°	1560.2	1567.1	1598.2	1615.4	1620.6
20°	1525.8	1536.1	1572.3	1589.5	1599.9
22.5°	1487.8	1503.3	1541.3	1562.0	1574.0
25°	1446.5	1465.4	1508.5	1534.4	1548.2
27.5°	1401.6	1425.8	1475.8	1505.1	1518.9
30°	1353.4	1380.9	1436.1	1470.6	1487.8
32.5°	1303.4	1336.1	1396.5	1434.4	1455.1
35°	1253.4	1289.6	1355.1	1399.9	1420.6
37.5°	1203.4	1239.6	1312.0	1360.3	1386.1
40°	1146.5	1189.6	1267.2	1320.6	1346.5
42.5°	1091.3	1137.9	1220.6	1279.2	1306.8
45°	1031.0	1086.1	1172.3	1237.8	1267.2
47.5°	975.8	1031.0	1124.1	1193.0	1225.8
50°	915.5	974.1	1072.3	1148.2	1182.7
52.5°	856.8	917.2	1020.6	1101.7	1136.1
55°	793.1	862.0	967.2	1051.7	1087.9
57.5°	729.3	803.4	912.0	999.9	1036.1
60°	667.2	743.1	856.8	944.8	982.7
62.5°	605.1	681.0	799.9	889.6	925.8
65°	539.6	618.9	737.9	829.3	865.5
67.5°	474.1	556.9	675.8	767.2	801.7
70°	405.1	493.1	612.0	701.7	736.2
72.5°	341.4	429.3	546.5	634.4	667.2
75°	277.6	365.5	479.3	560.3	582.7
77.5°	215.5	303.4	405.1	458.6	463.8
80°	156.9	239.6	322.4	337.9	336.2
82.5°	105.2	179.3	222.4	224.1	229.3
85°	60.3	112.1	122.4	120.7	122.4
87.5°	24.1	39.7	34.5	25.9	25.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)