

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: P389809

Luminaire Tested: **24CZ2-55VHE-S-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: P389809  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-1)  
Test Lab: INNOVATIONS CENTER(G3)  
Issue Date: 2/28/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ2-55VHE-S-UNV-L935-CD1-SWPD1-U  
Description: 2x4 CRUZE LED TROFFER WITH 3500K, 90 LEDS, AND SMOOTH LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4886.9 lumens  
Efficiency: N/A  
Efficacy: 135.4 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

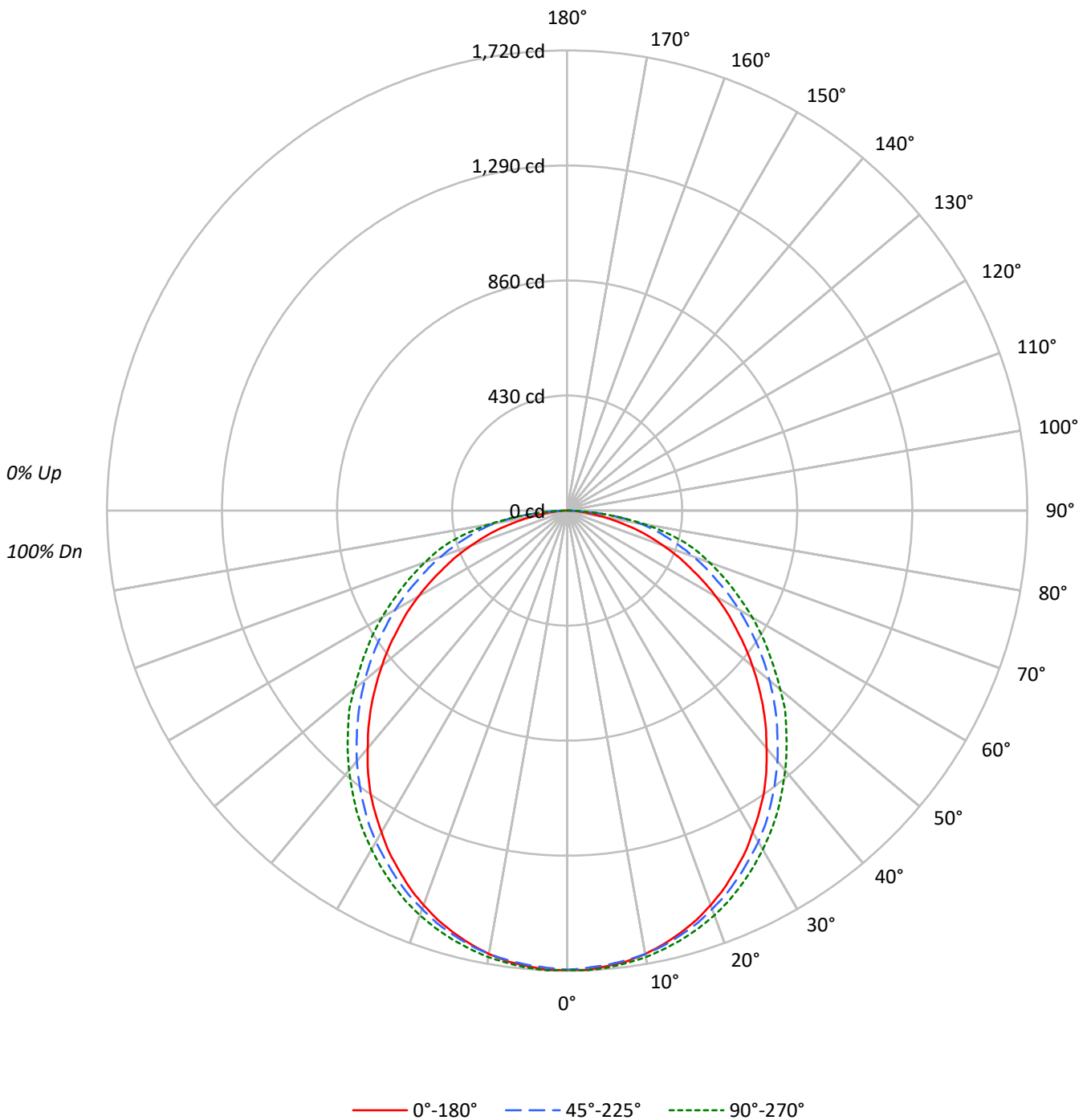
Input Watts (W): 36.1  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	99	95	106	101	97	93	97	93	90	93	90	88	89	87	85	83
2	98	90	83	77	96	88	81	76	84	79	74	81	76	72	78	74	71	69
3	89	79	70	64	87	77	69	63	74	67	62	71	66	61	69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53	63	57	52	61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42
6	70	56	47	40	68	55	47	40	53	46	40	52	45	40	50	44	39	37
7	64	51	42	36	63	50	42	36	48	41	35	47	40	35	46	39	35	33
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29
9	56	43	34	29	55	42	34	29	41	34	28	40	33	28	39	33	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	2310	2310	2310
5°	2308	2302	2317
10°	2299	2299	2316
15°	2277	2288	2311
20°	2247	2269	2305
25°	2205	2247	2291
30°	2156	2221	2272
35°	2109	2185	2254
40°	2037	2148	2227
45°	1970	2106	2203
50°	1894	2066	2177
55°	1810	2028	2156
60°	1725	1997	2151
65°	1616	1962	2165
70°	1496	1972	2223
75°	1340	2009	2348
80°	1082	2129	2297
85°	815	1870	1822



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	162.5	3.3
10°-20°	464.4	9.5
20°-30°	698.1	14.3
30°-40°	831.6	17.0
40°-50°	851.1	17.4
50°-60°	766.2	15.7
60°-70°	601.7	12.3
70°-80°	390.5	8.0
80°-90°	120.8	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°	1325.0	27.1
0°-40°	2156.6	44.1
0°-60°	3773.9	77.2
0°-90°	4886.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4886.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1717	1717	1717	1717	1717	
5°	1709	1712	1704	1714	1715	162
15°	1634	1639	1642	1656	1659	461
25°	1486	1498	1514	1538	1543	684
35°	1284	1299	1330	1363	1372	801
45°	1035	1060	1107	1149	1158	798
55°	772	806	865	910	919	692
65°	508	546	616	668	680	505
75°	258	307	386	439	452	273
85°	53	98	121	118	118	64
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1716.8	1716.8	1716.8	1716.8	1716.8
2.5°	1718.4	1718.4	1710.6	1718.4	1719.9
5°	1709.0	1712.1	1704.4	1713.7	1715.2
7.5°	1699.7	1699.7	1695.1	1704.4	1705.9
10°	1682.7	1684.2	1682.7	1693.5	1695.1
12.5°	1660.9	1664.0	1665.6	1676.4	1678.0
15°	1634.5	1639.2	1642.3	1656.3	1659.4
17.5°	1605.0	1609.7	1617.5	1633.0	1636.1
20°	1569.3	1575.5	1584.9	1605.0	1609.7
22.5°	1530.5	1536.7	1552.3	1570.9	1578.6
25°	1485.5	1497.9	1513.5	1538.3	1542.9
27.5°	1440.5	1451.4	1471.5	1497.9	1504.1
30°	1387.7	1404.8	1429.6	1456.0	1462.2
32.5°	1336.5	1353.6	1383.1	1411.0	1418.8
35°	1283.7	1299.2	1330.3	1362.9	1372.2
37.5°	1223.2	1243.4	1277.5	1310.1	1319.4
40°	1159.5	1184.4	1223.2	1257.3	1268.2
42.5°	1099.0	1125.4	1164.2	1201.4	1213.9
45°	1035.4	1060.2	1106.8	1148.7	1158.0
47.5°	970.2	998.1	1047.8	1089.7	1105.2
50°	905.0	934.5	987.2	1030.7	1040.0
52.5°	839.8	870.8	926.7	973.3	977.9
55°	771.5	805.6	864.6	909.6	918.9
57.5°	709.4	738.9	802.5	849.1	860.0
60°	641.1	673.7	742.0	785.4	799.4
62.5°	575.9	610.0	681.4	724.9	737.3
65°	507.6	546.4	616.2	667.5	679.9
67.5°	448.6	485.9	560.4	610.0	622.5
70°	380.3	422.2	501.4	552.6	565.0
72.5°	321.3	364.8	443.9	493.6	512.2
75°	257.7	307.3	386.5	439.3	451.7
77.5°	195.6	253.0	333.7	374.1	374.1
80°	139.7	200.2	274.8	293.4	296.5
82.5°	91.6	150.6	203.3	201.8	201.8
85°	52.8	97.8	121.1	118.0	118.0
87.5°	20.2	40.4	43.5	43.5	41.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)