

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: P388894

Luminaire Tested: **24CZ2-60VHE-UNV-L930-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: P388894  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-5)  
Test Lab: INNOVATIONS CENTER(G3)  
Issue Date: 2/28/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ2-60VHE-UNV-L930-CD1-SWPD1-U  
Description: 2x4 CRUZE LED TROFFER WITH 3000K, 90 LEDS, AND RIBBED LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4933.8 lumens  
Efficiency: N/A  
Efficacy: 127.5 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.27 / 1.37  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

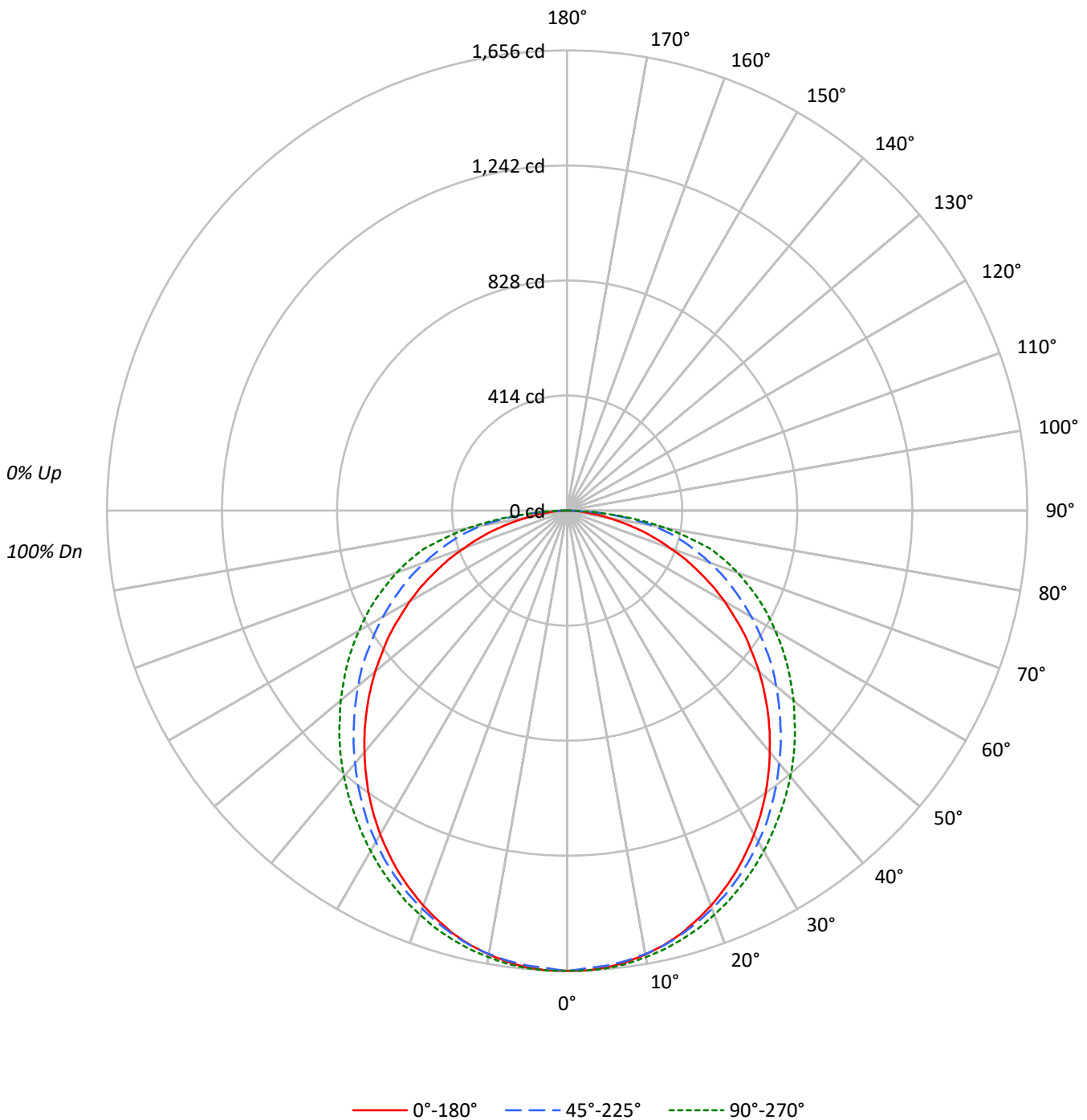
Input Watts (W): 38.7  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	58	56
4	81	69	59	52	79	67	59	52	65	57	51	62	56	51	60	55	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	39	50	44	38	49	43	38	36
7	64	50	41	35	62	49	40	34	47	40	34	46	39	34	45	38	34	32
8	59	45	37	31	58	45	36	31	43	36	30	42	35	30	41	35	30	28
9	55	42	33	28	54	41	33	28	40	33	27	39	32	27	38	32	27	25
10	52	38	30	25	51	38	30	25	37	30	25	36	29	25	35	29	25	23

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

	0°	45°	90°
0°	2229	2229	2229
5°	2228	2219	2233
10°	2216	2214	2229
15°	2197	2202	2225
20°	2167	2183	2216
25°	2132	2163	2207
30°	2090	2139	2198
35°	2045	2112	2191
40°	1993	2085	2195
45°	1943	2065	2206
50°	1889	2054	2227
55°	1831	2051	2267
60°	1759	2060	2326
65°	1667	2092	2427
70°	1548	2144	2565
75°	1412	2252	2782
80°	1161	2424	2782
85°	889	2237	2390



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	156.7	3.2
10°-20°	447.3	9.1
20°-30°	673.1	13.6
30°-40°	806.6	16.3
40°-50°	840.6	17.0
50°-60°	782.0	15.9
60°-70°	644.1	13.1
70°-80°	438.7	8.9
80°-90°	144.8	2.9
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°	1277.0	25.9
0°-40°	2083.6	42.2
0°-60°	3706.2	75.1
0°-90°	4933.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4933.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1656	1656	1656	1656	1656	
5°	1650	1650	1643	1652	1653	157
15°	1578	1579	1581	1596	1597	444
25°	1436	1442	1457	1482	1487	661
35°	1245	1260	1286	1321	1334	778
45°	1021	1042	1085	1140	1159	787
55°	780	807	874	944	967	696
65°	524	568	657	734	762	520
75°	272	333	433	510	535	286
85°	58	112	145	155	155	71
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1656.5	1656.5	1656.5	1656.5	1656.5
2.5°	1656.5	1656.5	1648.3	1656.5	1656.5
5°	1649.9	1649.9	1643.3	1651.6	1653.2
7.5°	1638.4	1640.0	1633.5	1643.3	1645.0
10°	1621.9	1623.6	1620.3	1630.2	1631.8
12.5°	1602.2	1603.8	1603.8	1615.3	1617.0
15°	1577.5	1579.1	1580.8	1595.6	1597.2
17.5°	1546.2	1551.1	1554.4	1572.5	1575.8
20°	1513.2	1518.2	1524.8	1544.5	1547.8
22.5°	1475.4	1482.0	1493.5	1514.9	1519.8
25°	1435.9	1442.4	1457.3	1482.0	1486.9
27.5°	1391.4	1401.3	1419.4	1445.7	1452.3
30°	1345.3	1355.2	1376.6	1404.6	1414.5
32.5°	1295.9	1309.1	1333.8	1365.1	1374.9
35°	1244.8	1259.7	1286.0	1320.6	1333.8
37.5°	1190.5	1207.0	1238.3	1276.1	1292.6
40°	1134.5	1154.3	1187.2	1231.7	1249.8
42.5°	1078.5	1096.7	1137.8	1185.6	1205.3
45°	1020.9	1042.3	1085.1	1139.5	1159.2
47.5°	961.6	983.0	1034.1	1091.7	1109.8
50°	902.4	923.8	981.4	1042.3	1063.7
52.5°	838.1	866.1	932.0	992.9	1014.3
55°	780.5	806.8	874.4	943.5	966.6
57.5°	714.6	745.9	820.0	892.5	917.2
60°	653.7	686.6	765.7	839.8	864.5
62.5°	591.1	627.4	711.3	787.1	815.1
65°	523.6	568.1	657.0	734.4	762.4
67.5°	462.7	508.8	602.7	681.7	706.4
70°	393.5	449.5	545.0	624.1	652.1
72.5°	334.3	390.3	490.7	568.1	596.1
75°	271.7	332.6	433.1	510.5	535.2
77.5°	209.1	276.6	377.1	436.4	444.6
80°	149.8	220.6	312.9	347.4	359.0
82.5°	105.4	169.6	230.5	253.6	260.2
85°	57.6	112.0	144.9	154.8	154.8
87.5°	24.7	47.8	57.6	59.3	60.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)