

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: P229980

Luminaire Tested: **24CZ-LD5-60-UNV-L930-CD1-U**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P229980  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P25697)  
Test Lab: INNOVATION CENTER-P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ-LD5-60-UNV-L930-CD1-U  
Description: CRUZE 2x4 LED TROFFER  
WITH RIBBED LENS  
Light Source: (168) 3000K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5052.0 lumens  
Efficiency: N/A  
Efficacy: 96.8 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.25 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

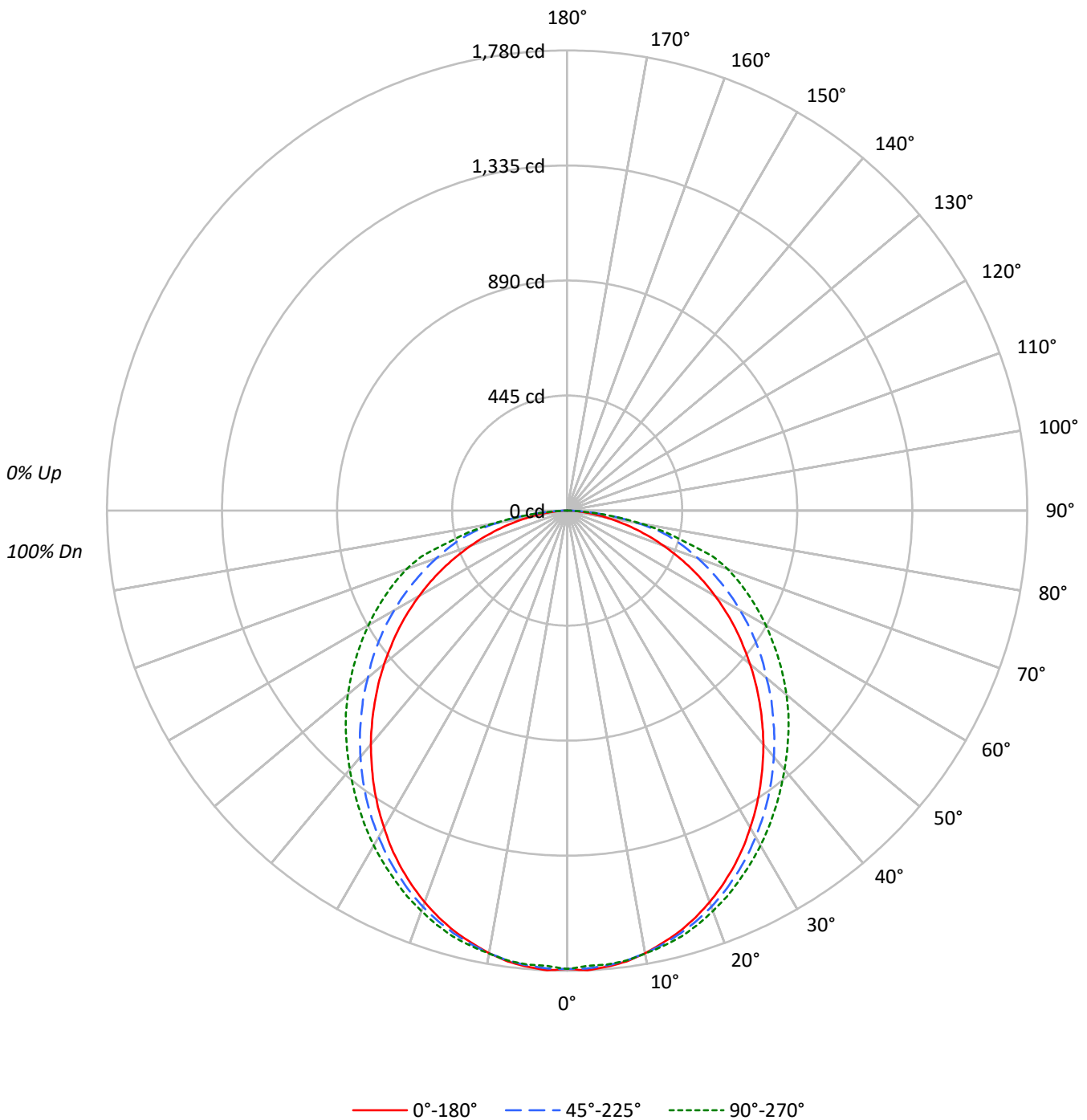
Input Watts (W): 52.17  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	95	88	81	76	84	79	74	81	76	72	78	74	71	68
3	89	78	70	63	87	77	69	63	74	67	62	71	65	61	68	64	60	57
4	82	69	60	54	79	68	60	53	66	58	52	63	57	52	61	56	51	49
5	75	62	53	46	73	61	52	46	59	51	45	57	50	45	55	49	44	42
6	69	56	47	40	67	55	46	40	53	45	40	51	44	39	50	44	39	37
7	64	51	42	35	63	50	41	35	48	41	35	47	40	35	45	39	35	32
8	60	46	38	32	58	45	37	32	44	37	31	43	36	31	42	36	31	29
9	56	42	34	28	54	42	34	28	41	33	28	40	33	28	38	32	28	26
10	52	39	31	26	51	39	31	26	38	31	26	37	30	25	36	30	25	24

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

	0°	45°	90°
0°	2386	2386	2386
5°	2392	2385	2381
10°	2375	2375	2377
15°	2347	2359	2376
20°	2308	2336	2360
25°	2260	2303	2342
30°	2201	2266	2325
35°	2139	2227	2307
40°	2075	2184	2297
45°	2004	2143	2304
50°	1933	2107	2317
55°	1863	2094	2341
60°	1778	2081	2388
65°	1685	2082	2467
70°	1558	2116	2600
75°	1394	2212	2473
80°	1166	2118	2265
85°	881	1629	1548



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	167.5	3.3
10°-20°	476.8	9.4
20°-30°	712.9	14.1
30°-40°	845.7	16.7
40°-50°	870.4	17.2
50°-60°	798.5	15.8
60°-70°	645.6	12.8
70°-80°	419.0	8.3
80°-90°	115.5	2.3
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°	1357.2	26.9
0°-40°	2202.9	43.6
0°-60°	3871.8	76.6
0°-90°	5052.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5052.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1773	1773	1773	1773	1773	
5°	1771	1759	1766	1764	1763	168
15°	1685	1678	1693	1700	1706	475
25°	1522	1524	1552	1565	1578	701
35°	1302	1313	1356	1386	1405	815
45°	1053	1071	1126	1180	1211	813
55°	794	818	892	965	998	709
65°	529	560	654	740	775	523
75°	268	318	426	476	476	285
85°	57	97	106	102	100	70
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1773.0	1773.0	1773.0	1773.0	1773.0
2.5°	1779.9	1766.1	1773.0	1771.3	1762.6
5°	1771.3	1759.2	1766.1	1764.3	1762.6
7.5°	1759.2	1747.0	1755.7	1754.0	1755.7
10°	1738.4	1728.0	1738.4	1740.1	1740.1
12.5°	1712.4	1703.8	1717.6	1721.1	1724.6
15°	1684.8	1677.9	1693.4	1700.3	1705.5
17.5°	1650.2	1645.0	1664.0	1672.7	1679.6
20°	1612.1	1610.4	1631.2	1639.8	1648.4
22.5°	1568.9	1568.9	1593.1	1603.5	1615.6
25°	1522.2	1523.9	1551.6	1565.4	1577.5
27.5°	1472.0	1473.7	1506.6	1523.9	1537.7
30°	1416.7	1423.6	1458.2	1480.7	1496.2
32.5°	1361.3	1370.0	1408.0	1434.0	1451.3
35°	1302.5	1312.9	1356.1	1385.5	1404.6
37.5°	1242.0	1254.1	1300.8	1333.6	1356.1
40°	1181.4	1195.3	1243.7	1281.7	1307.7
42.5°	1117.4	1133.0	1186.6	1231.6	1259.3
45°	1053.4	1070.7	1126.1	1179.7	1210.8
47.5°	989.4	1010.2	1069.0	1127.8	1160.7
50°	923.7	944.4	1006.7	1074.2	1107.0
52.5°	858.0	882.2	951.4	1020.5	1053.4
55°	794.0	818.2	892.5	965.2	998.1
57.5°	728.2	752.4	833.7	909.8	942.7
60°	660.8	688.4	773.2	851.0	887.4
62.5°	595.0	624.4	714.4	797.4	832.0
65°	529.3	560.4	653.8	740.3	774.9
67.5°	461.8	498.2	595.0	683.2	719.6
70°	396.1	435.9	538.0	626.2	660.8
72.5°	332.1	375.4	480.9	570.8	591.6
75°	268.1	318.3	425.5	475.7	475.7
77.5°	207.6	262.9	363.2	382.3	392.7
80°	150.5	211.0	273.3	295.8	292.3
82.5°	100.3	160.9	195.5	195.5	190.3
85°	57.1	96.9	105.5	102.1	100.3
87.5°	24.2	36.3	32.9	25.9	22.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)