

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: P230052

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P230052
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P25694)
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ-LD5-60-S-UNV-L930-CD1-U
Description: CRUZE 2x4 LED TROFFER
WITH SMOOTH LENS
Light Source: (168) 3000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5153.0 lumens
Efficiency: N/A
Efficacy: 98.8 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

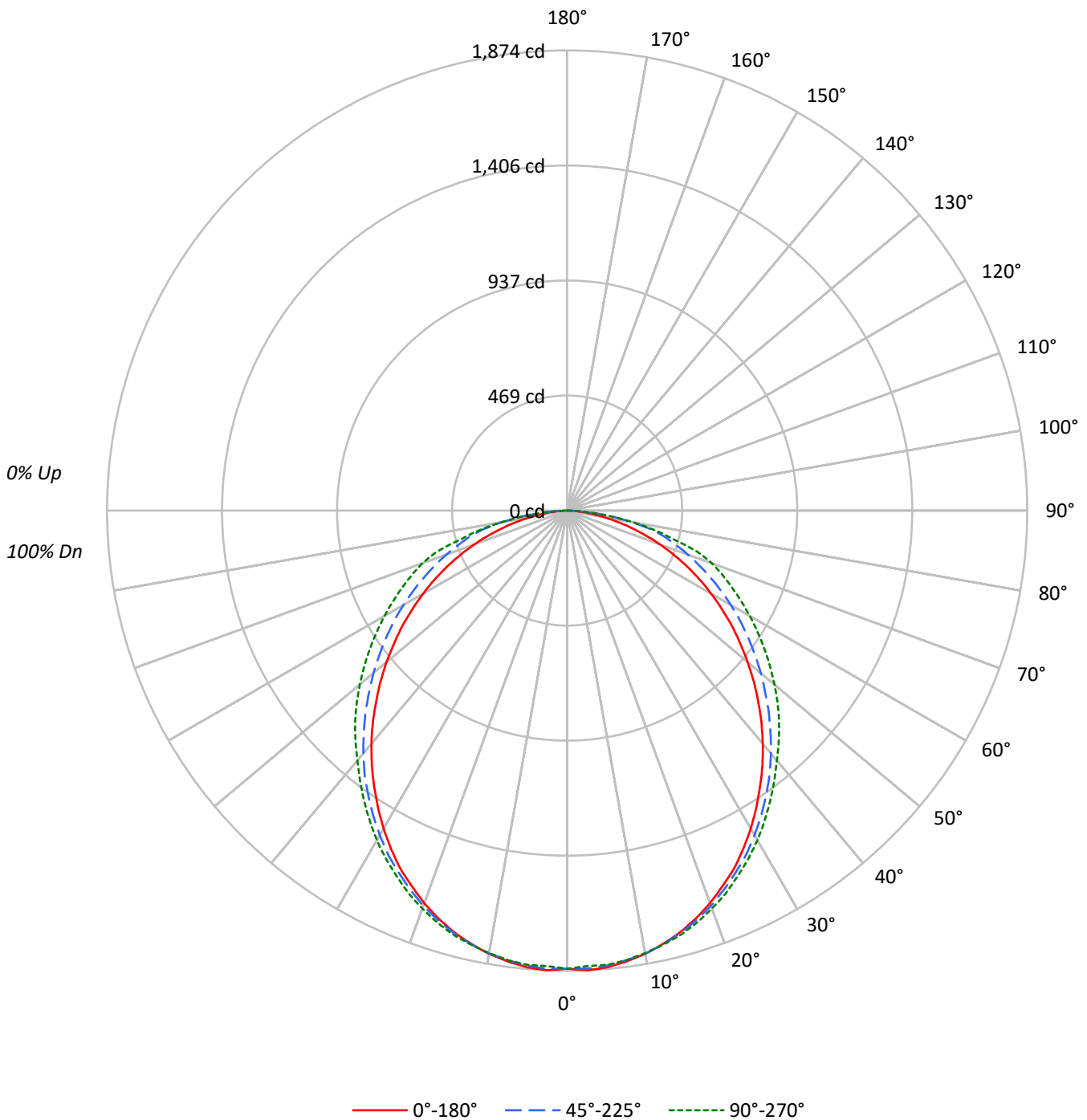
Input Watts (W): 52.17
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	104	99	95	106	101	97	94	97	94	91	93	90	88	89	87	85	83
2	99	90	83	77	96	88	82	76	85	79	75	81	77	73	78	75	71	69
3	90	79	71	64	87	77	70	64	74	68	62	72	66	61	69	64	60	58
4	82	70	61	54	80	69	60	54	66	59	53	64	58	52	62	56	52	50
5	76	63	53	47	73	61	53	47	59	52	46	57	51	45	55	50	45	43
6	70	56	47	41	68	55	47	41	54	46	40	52	45	40	50	44	40	38
7	65	51	42	36	63	50	42	36	49	41	36	47	41	35	46	40	35	33
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	32	30
9	56	43	35	29	55	42	34	29	41	34	29	40	33	29	39	33	29	27
10	53	40	32	26	52	39	31	26	38	31	26	37	31	26	36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2510	2510	2510
5°	2522	2513	2508
10°	2504	2502	2500
15°	2477	2482	2491
20°	2435	2453	2470
25°	2388	2413	2439
30°	2323	2371	2408
35°	2250	2321	2369
40°	2177	2268	2334
45°	2095	2209	2323
50°	2010	2153	2308
55°	1923	2107	2301
60°	1823	2072	2312
65°	1714	2047	2358
70°	1578	2057	2469
75°	1399	2130	2300
80°	1169	2019	2073
85°	874	1615	1482



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	176.4	3.4
10°-20°	501.6	9.7
20°-30°	747.5	14.5
30°-40°	880.0	17.1
40°-50°	894.2	17.4
50°-60°	804.0	15.6
60°-70°	635.2	12.3
70°-80°	403.0	7.8
80°-90°	111.2	2.2
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°	1425.5	27.7
0°-40°	2305.5	44.7
0°-60°	4003.7	77.7
0°-90°	5153.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5153.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1866	1866	1866	1866	1866	
5°	1867	1852	1860	1857	1857	177
15°	1778	1770	1782	1787	1788	501
25°	1608	1607	1625	1636	1643	739
35°	1370	1378	1413	1428	1442	857
45°	1101	1116	1161	1195	1221	849
55°	820	840	898	957	981	732
65°	538	566	643	713	741	533
75°	269	316	410	446	442	287
85°	57	98	105	96	96	69
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1865.5	1865.5	1865.5	1865.5	1865.5
2.5°	1874.1	1860.3	1867.2	1863.8	1856.9
5°	1867.2	1851.8	1860.3	1856.9	1856.9
7.5°	1851.8	1839.8	1846.6	1844.9	1846.6
10°	1832.9	1820.9	1831.2	1831.2	1829.5
12.5°	1807.2	1796.9	1808.9	1808.9	1810.6
15°	1778.0	1769.5	1781.5	1786.6	1788.3
17.5°	1742.0	1733.5	1748.9	1754.0	1759.2
20°	1700.9	1697.5	1712.9	1718.0	1724.9
22.5°	1654.6	1654.6	1670.0	1676.9	1687.2
25°	1608.3	1606.6	1625.4	1635.7	1642.6
27.5°	1553.4	1555.1	1579.1	1589.4	1598.0
30°	1495.1	1498.6	1526.0	1538.0	1550.0
32.5°	1433.4	1440.3	1471.1	1484.8	1496.8
35°	1370.0	1378.5	1412.8	1428.3	1442.0
37.5°	1306.5	1318.5	1354.5	1370.0	1385.4
40°	1239.7	1249.9	1291.1	1310.0	1328.8
42.5°	1171.1	1184.8	1225.9	1253.4	1275.7
45°	1100.8	1116.2	1160.8	1195.1	1220.8
47.5°	1030.5	1051.0	1093.9	1140.2	1162.5
50°	960.2	980.7	1028.8	1080.2	1102.5
52.5°	888.2	908.7	963.6	1016.8	1040.8
55°	819.6	840.2	898.4	956.7	980.7
57.5°	747.6	769.9	835.0	895.0	919.0
60°	677.3	699.6	769.9	833.3	859.0
62.5°	608.7	632.7	706.4	773.3	799.0
65°	538.4	565.8	643.0	713.3	740.7
67.5°	469.8	500.7	581.2	655.0	684.1
70°	401.2	437.2	523.0	598.4	627.5
72.5°	334.3	373.8	464.7	540.1	555.5
75°	269.2	315.5	409.8	445.8	442.4
77.5°	207.5	258.9	348.1	354.9	365.2
80°	150.9	207.5	260.6	274.3	267.5
82.5°	99.4	156.0	186.9	180.0	178.3
85°	56.6	97.7	104.6	96.0	96.0
87.5°	24.0	39.4	34.3	25.7	24.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)