

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: P229982

Luminaire Tested: **24CZ-LD5-60-UNV-L940-CD1-U**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P229982
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-L940-CD1-U
Description: CRUZE 2x4 LED TROFFER
WITH RIBBED LENS
Light Source: (168) 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5381.0 lumens
Efficiency: N/A
Efficacy: 103.1 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

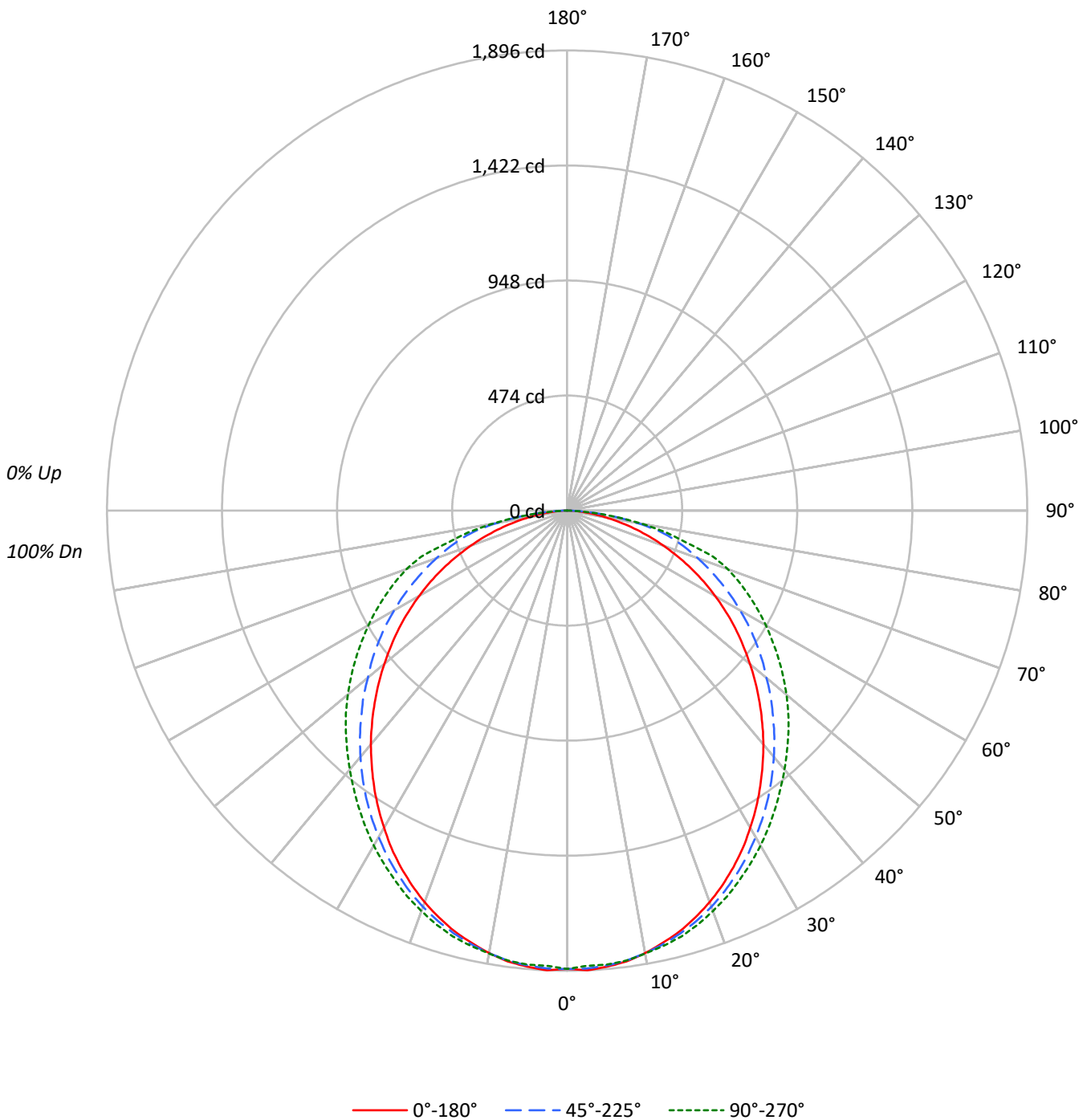
Input Watts (W): 52.17
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2541	2541	2541
5°	2548	2541	2536
10°	2530	2530	2532
15°	2500	2512	2530
20°	2459	2488	2514
25°	2407	2453	2495
30°	2344	2413	2476
35°	2279	2372	2457
40°	2210	2327	2446
45°	2135	2282	2454
50°	2059	2245	2468
55°	1984	2230	2494
60°	1894	2216	2543
65°	1795	2217	2628
70°	1660	2254	2769
75°	1485	2356	2634
80°	1242	2256	2413
85°	939	1735	1650



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	178.5	3.3
10°-20°	507.9	9.4
20°-30°	759.3	14.1
30°-40°	900.7	16.7
40°-50°	927.1	17.2
50°-60°	850.5	15.8
60°-70°	687.7	12.8
70°-80°	446.3	8.3
80°-90°	123.1	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°	1445.6	26.9
0°-40°	2346.4	43.6
0°-60°	4124.0	76.6
0°-90°	5381.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5381.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1888	1888	1888	1888	1888	
5°	1887	1874	1881	1879	1877	179
15°	1794	1787	1804	1811	1817	506
25°	1621	1623	1653	1667	1680	746
35°	1387	1398	1444	1476	1496	868
45°	1122	1140	1199	1256	1290	866
55°	846	872	951	1028	1063	755
65°	564	597	696	788	825	557
75°	286	339	453	507	507	304
85°	61	103	112	109	107	74
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1888.5	1888.5	1888.5	1888.5	1888.5
2.5°	1895.8	1881.1	1888.5	1886.6	1877.4
5°	1886.6	1873.7	1881.1	1879.2	1877.4
7.5°	1873.7	1860.8	1870.0	1868.2	1870.0
10°	1851.6	1840.5	1851.6	1853.4	1853.4
12.5°	1824.0	1814.8	1829.5	1833.2	1836.9
15°	1794.5	1787.1	1803.7	1811.1	1816.6
17.5°	1757.6	1752.1	1772.4	1781.6	1789.0
20°	1717.1	1715.3	1737.4	1746.6	1755.8
22.5°	1671.0	1671.0	1696.8	1707.9	1720.8
25°	1621.3	1623.1	1652.6	1667.4	1680.3
27.5°	1567.9	1569.7	1604.7	1623.1	1637.9
30°	1508.9	1516.3	1553.1	1577.1	1593.7
32.5°	1450.0	1459.2	1499.7	1527.3	1545.8
35°	1387.3	1398.4	1444.4	1475.8	1496.0
37.5°	1322.8	1335.7	1385.5	1420.5	1444.4
40°	1258.4	1273.1	1324.7	1365.2	1392.8
42.5°	1190.2	1206.8	1263.9	1311.8	1341.3
45°	1122.0	1140.4	1199.4	1256.5	1289.7
47.5°	1053.8	1076.0	1138.6	1201.2	1236.2
50°	983.8	1005.9	1072.3	1144.1	1179.1
52.5°	913.8	939.6	1013.3	1087.0	1122.0
55°	845.7	871.5	950.7	1028.1	1063.1
57.5°	775.6	801.4	888.0	969.1	1004.1
60°	703.8	733.3	823.5	906.5	945.1
62.5°	633.8	665.1	760.9	849.3	886.2
65°	563.8	596.9	696.4	788.5	825.4
67.5°	491.9	530.6	633.8	727.7	766.4
70°	421.9	464.3	573.0	666.9	703.8
72.5°	353.7	399.8	512.2	608.0	630.1
75°	285.6	339.0	453.2	506.7	506.7
77.5°	221.1	280.0	386.9	407.2	418.2
80°	160.3	224.8	291.1	315.0	311.4
82.5°	106.9	171.3	208.2	208.2	202.7
85°	60.8	103.2	112.4	108.7	106.9
87.5°	25.8	38.7	35.0	27.6	24.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)