

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: P229981

Luminaire Tested: **24CZ-LD5-60-UNV-L935-CD1-U**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P229981  
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-L935-CD1-U  
Description: CRUZE 2x4 LED TROFFER  
WITH RIBBED LENS  
Light Source: (168) 3500K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5251.0 lumens  
Efficiency: N/A  
Efficacy: 100.7 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

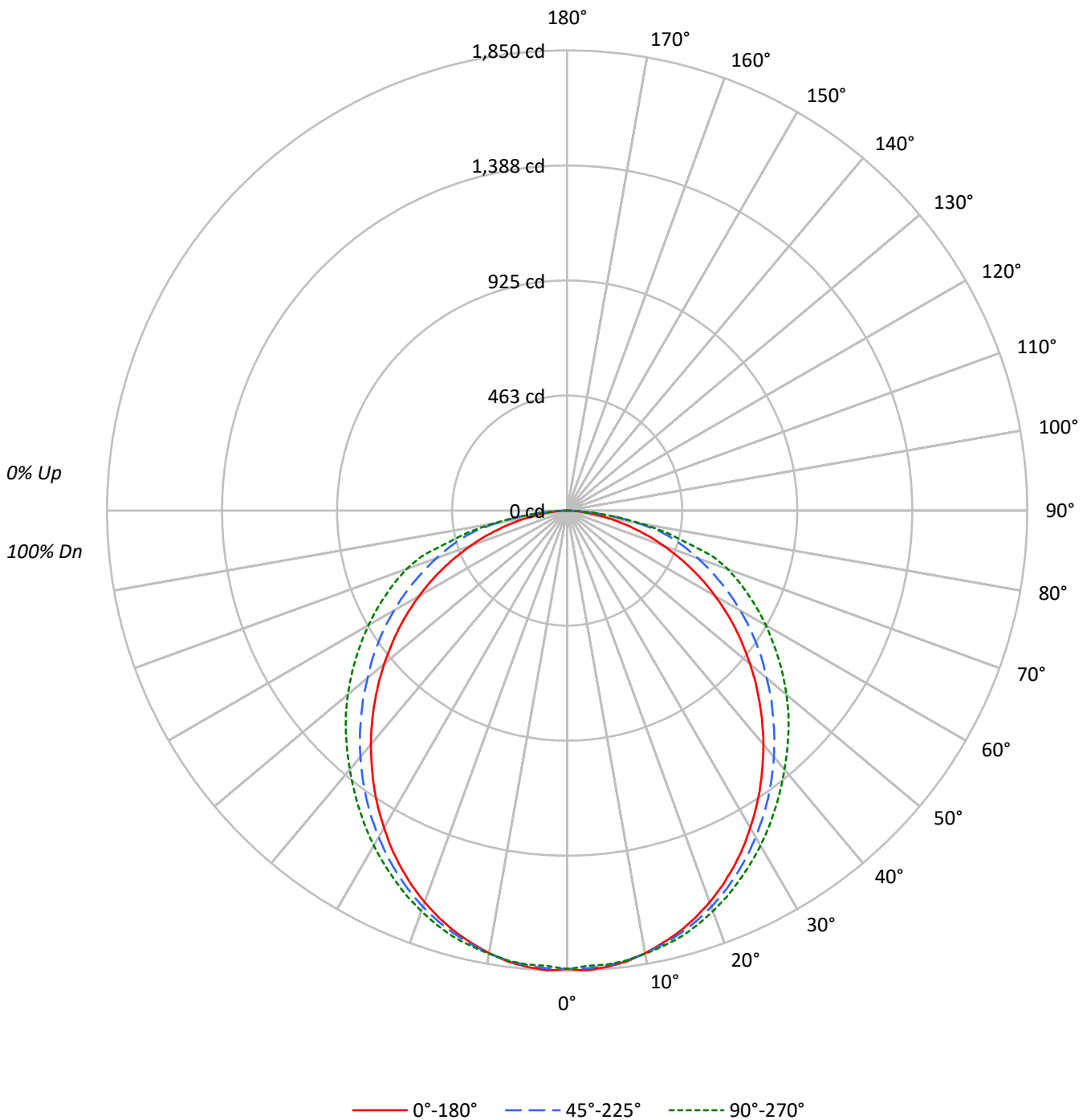
Input Watts (W): 52.17  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	2479	2479	2479
5°	2487	2479	2474
10°	2469	2469	2471
15°	2439	2452	2469
20°	2399	2428	2453
25°	2349	2394	2434
30°	2288	2355	2416
35°	2224	2315	2398
40°	2157	2271	2387
45°	2083	2227	2395
50°	2010	2190	2408
55°	1936	2176	2434
60°	1848	2163	2482
65°	1752	2164	2564
70°	1620	2199	2702
75°	1449	2299	2570
80°	1212	2201	2354
85°	915	1694	1610



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	174.1	3.3
10°-20°	495.6	9.4
20°-30°	740.9	14.1
30°-40°	879.0	16.7
40°-50°	904.7	17.2
50°-60°	829.9	15.8
60°-70°	671.1	12.8
70°-80°	435.5	8.3
80°-90°	120.1	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°	1410.7	26.9
0°-40°	2289.7	43.6
0°-60°	4024.3	76.6
0°-90°	5251.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5251.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1843	1843	1843	1843	1843	
5°	1841	1828	1836	1834	1832	175
15°	1751	1744	1760	1767	1773	493
25°	1582	1584	1613	1627	1640	728
35°	1354	1365	1410	1440	1460	847
45°	1095	1113	1170	1226	1258	845
55°	825	850	928	1003	1037	737
65°	550	582	680	770	806	544
75°	279	331	442	494	494	296
85°	59	101	110	106	104	73
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1842.8	1842.8	1842.8	1842.8	1842.8
2.5°	1850.0	1835.6	1842.8	1841.0	1832.0
5°	1841.0	1828.4	1835.6	1833.8	1832.0
7.5°	1828.4	1815.9	1824.8	1823.1	1824.8
10°	1806.9	1796.1	1806.9	1808.7	1808.7
12.5°	1779.9	1770.9	1785.3	1788.9	1792.5
15°	1751.1	1743.9	1760.1	1767.3	1772.7
17.5°	1715.2	1709.8	1729.6	1738.6	1745.7
20°	1675.6	1673.8	1695.4	1704.4	1713.4
22.5°	1630.7	1630.7	1655.8	1666.6	1679.2
25°	1582.1	1583.9	1612.7	1627.1	1639.7
27.5°	1530.0	1531.8	1566.0	1583.9	1598.3
30°	1472.5	1479.7	1515.6	1539.0	1555.2
32.5°	1414.9	1423.9	1463.5	1490.4	1508.4
35°	1353.8	1364.6	1409.5	1440.1	1459.9
37.5°	1290.9	1303.5	1352.0	1386.2	1409.5
40°	1228.0	1242.3	1292.7	1332.2	1359.2
42.5°	1161.4	1177.6	1233.3	1280.1	1308.9
45°	1094.9	1112.9	1170.4	1226.2	1258.5
47.5°	1028.4	1050.0	1111.1	1172.2	1206.4
50°	960.1	981.6	1046.4	1116.5	1150.6
52.5°	891.7	916.9	988.8	1060.7	1094.9
55°	825.2	850.4	927.7	1003.2	1037.4
57.5°	756.9	782.1	866.6	945.7	979.8
60°	686.8	715.6	803.7	884.6	922.3
62.5°	618.5	649.0	742.5	828.8	864.8
65°	550.2	582.5	679.6	769.5	805.5
67.5°	480.0	517.8	618.5	710.2	747.9
70°	411.7	453.1	559.1	650.8	686.8
72.5°	345.2	390.1	499.8	593.3	614.9
75°	278.7	330.8	442.3	494.4	494.4
77.5°	215.7	273.3	377.6	397.3	408.1
80°	156.4	219.3	284.1	307.4	303.8
82.5°	104.3	167.2	203.2	203.2	197.8
85°	59.3	100.7	109.7	106.1	104.3
87.5°	25.2	37.8	34.2	27.0	23.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)