

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: P230092

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P230092
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-LD5-60SE-S-UNV-L930-CD1-U
Description: CRUZE 2x4 LED TROFFER
WITH SMOOTH LENS
Light Source: (84) 3000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5037.0 lumens
Efficiency: N/A
Efficacy: 83.9 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

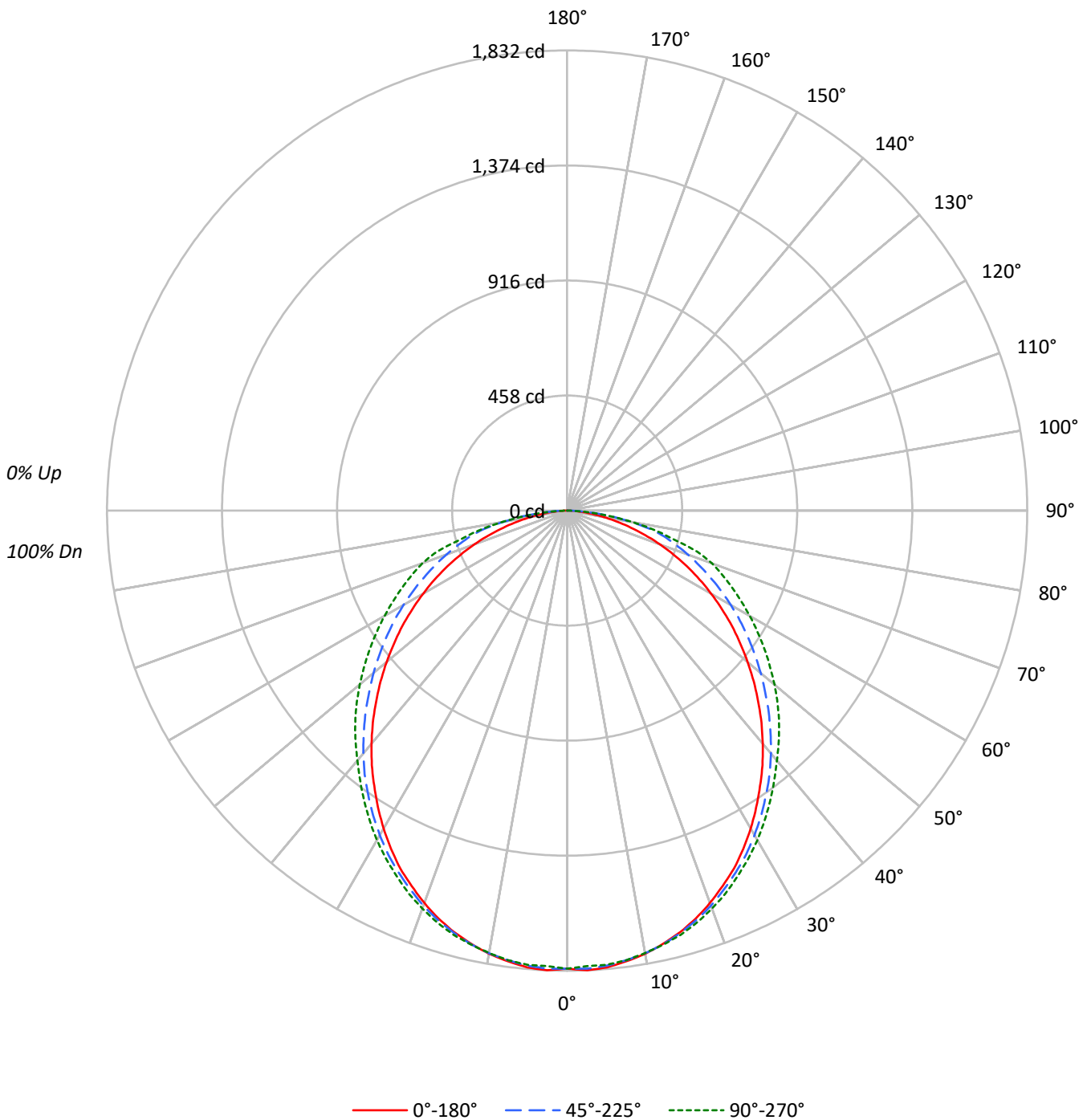
Input Watts (W): 60
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20			20				20			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	50	30	10
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100	100	
1	108	104	99	95	106	101	97	94	97	94	91	93	90	88	89	87	85	83	83	
2	99	90	83	77	96	88	82	76	85	79	75	81	77	73	78	75	71	69	69	
3	90	79	71	64	87	77	70	64	74	68	62	72	66	61	69	64	60	58	58	
4	82	70	61	54	80	69	60	54	66	59	53	64	58	52	62	56	52	50	50	
5	76	63	53	47	73	61	53	47	59	52	46	57	51	45	55	50	45	43	43	
6	70	56	47	41	68	55	47	41	54	46	40	52	45	40	50	44	40	38	38	
7	65	51	42	36	63	50	42	36	49	41	36	47	41	35	46	40	35	33	33	
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	32	30	30	
9	56	43	35	29	55	42	34	29	41	34	29	40	33	29	39	33	29	27	27	
10	53	40	32	26	52	39	31	26	38	31	26	37	31	26	36	30	26	24	24	

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2453	2453	2453
5°	2465	2456	2452
10°	2448	2446	2443
15°	2421	2426	2435
20°	2381	2397	2414
25°	2334	2359	2384
30°	2271	2317	2354
35°	2200	2268	2315
40°	2128	2217	2281
45°	2047	2159	2271
50°	1965	2105	2256
55°	1879	2060	2249
60°	1781	2025	2260
65°	1676	2001	2305
70°	1543	2011	2413
75°	1368	2083	2248
80°	1143	1974	2026
85°	854	1578	1450



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	172.4	3.4
10°-20°	490.3	9.7
20°-30°	730.7	14.5
30°-40°	860.1	17.1
40°-50°	874.1	17.4
50°-60°	785.9	15.6
60°-70°	620.9	12.3
70°-80°	393.9	7.8
80°-90°	108.7	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°	1393.4	27.7
0°-40°	2253.6	44.7
0°-60°	3913.5	77.7
0°-90°	5037.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5037.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1824	1824	1824	1824	1824	
5°	1825	1810	1818	1815	1815	173
15°	1738	1730	1741	1746	1748	490
25°	1572	1570	1589	1599	1606	723
35°	1339	1348	1381	1396	1410	838
45°	1076	1091	1135	1168	1193	830
55°	801	821	878	935	959	715
65°	526	553	628	697	724	521
75°	263	308	401	436	432	280
85°	55	96	102	94	94	68
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1823.5	1823.5	1823.5	1823.5	1823.5
2.5°	1831.9	1818.5	1825.2	1821.8	1815.1
5°	1825.2	1810.1	1818.5	1815.1	1815.1
7.5°	1810.1	1798.3	1805.1	1803.4	1805.1
10°	1791.6	1779.9	1790.0	1790.0	1788.3
12.5°	1766.5	1756.4	1768.2	1768.2	1769.9
15°	1738.0	1729.6	1741.4	1746.4	1748.1
17.5°	1702.8	1694.4	1709.5	1714.5	1719.6
20°	1662.6	1659.2	1674.3	1679.4	1686.1
22.5°	1617.3	1617.3	1632.4	1639.1	1649.2
25°	1572.1	1570.4	1588.8	1598.9	1605.6
27.5°	1518.5	1520.1	1543.6	1553.7	1562.0
30°	1461.5	1464.8	1491.6	1503.4	1515.1
32.5°	1401.1	1407.8	1438.0	1451.4	1463.1
35°	1339.1	1347.5	1381.0	1396.1	1409.5
37.5°	1277.1	1288.8	1324.0	1339.1	1354.2
40°	1211.7	1221.8	1262.0	1280.5	1298.9
42.5°	1144.7	1158.1	1198.3	1225.2	1246.9
45°	1076.0	1091.1	1134.7	1168.2	1193.3
47.5°	1007.3	1027.4	1069.3	1114.5	1136.3
50°	938.6	958.7	1005.6	1055.9	1077.7
52.5°	868.2	888.3	941.9	993.9	1017.3
55°	801.1	821.2	878.2	935.2	958.7
57.5°	730.7	752.5	816.2	874.9	898.3
60°	662.0	683.8	752.5	814.5	839.7
62.5°	595.0	618.4	690.5	755.9	781.0
65°	526.3	553.1	628.5	697.2	724.0
67.5°	459.2	489.4	568.2	640.2	668.7
70°	392.2	427.4	511.2	584.9	613.4
72.5°	326.8	365.4	454.2	527.9	543.0
75°	263.1	308.4	400.6	435.8	432.4
77.5°	202.8	253.1	340.2	346.9	357.0
80°	147.5	202.8	254.8	268.2	261.5
82.5°	97.2	152.5	182.7	176.0	174.3
85°	55.3	95.5	102.2	93.9	93.9
87.5°	23.5	38.5	33.5	25.1	23.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)