

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: P230022

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

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P230022  
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-LD5-60SE-UNV-L940-CD1-U  
Description: CRUZE 2x4 LED TROFFER  
WITH RIBBED LENS  
Light Source: (84) 4000K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5259.0 lumens  
Efficiency: N/A  
Efficacy: 87.6 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

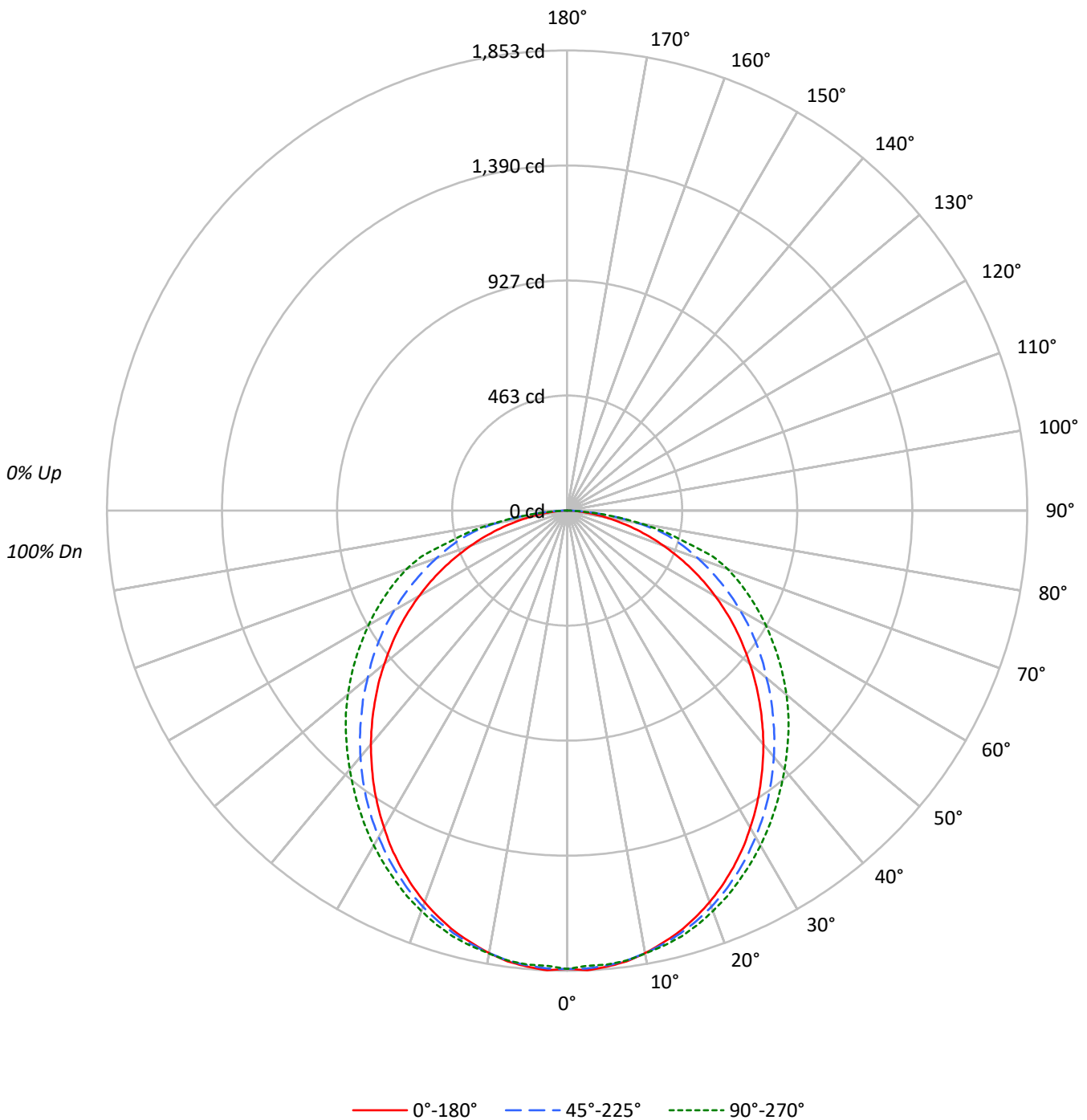
Input Watts (W): 60  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20				20				20				20				20	
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°	2483	2483	2483
5°	2490	2483	2478
10°	2472	2472	2475
15°	2443	2455	2473
20°	2403	2431	2457
25°	2352	2398	2438
30°	2291	2358	2420
35°	2227	2319	2402
40°	2160	2274	2391
45°	2087	2230	2398
50°	2013	2194	2412
55°	1939	2179	2437
60°	1851	2166	2486
65°	1754	2167	2568
70°	1622	2203	2706
75°	1451	2303	2574
80°	1214	2204	2358
85°	917	1695	1612



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	174.4	3.3
10°-20°	496.4	9.4
20°-30°	742.1	14.1
30°-40°	880.3	16.7
40°-50°	906.1	17.2
50°-60°	831.2	15.8
60°-70°	672.1	12.8
70°-80°	436.2	8.3
80°-90°	120.3	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°	1412.9	26.9
0°-40°	2293.2	43.6
0°-60°	4030.5	76.6
0°-90°	5259.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5259.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1846	1846	1846	1846	1846	
5°	1844	1831	1838	1837	1835	175
15°	1754	1747	1763	1770	1775	494
25°	1584	1586	1615	1630	1642	729
35°	1356	1367	1412	1442	1462	848
45°	1097	1115	1172	1228	1260	846
55°	826	852	929	1005	1039	738
65°	551	583	681	771	807	545
75°	279	331	443	495	495	297
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°	1845.6	1845.6	1845.6	1845.6	1845.6
2.5°	1852.8	1838.4	1845.6	1843.8	1834.8
5°	1843.8	1831.2	1838.4	1836.6	1834.8
7.5°	1831.2	1818.6	1827.6	1825.8	1827.6
10°	1809.6	1798.8	1809.6	1811.4	1811.4
12.5°	1782.6	1773.6	1788.0	1791.6	1795.2
15°	1753.8	1746.6	1762.8	1770.0	1775.4
17.5°	1717.8	1712.4	1732.2	1741.2	1748.4
20°	1678.2	1676.4	1698.0	1707.0	1716.0
22.5°	1633.2	1633.2	1658.4	1669.2	1681.8
25°	1584.5	1586.3	1615.2	1629.6	1642.2
27.5°	1532.3	1534.1	1568.3	1586.3	1600.8
30°	1474.7	1481.9	1517.9	1541.3	1557.5
32.5°	1417.1	1426.1	1465.7	1492.7	1510.7
35°	1355.9	1366.7	1411.7	1442.3	1462.1
37.5°	1292.8	1305.4	1354.1	1388.3	1411.7
40°	1229.8	1244.2	1294.6	1334.3	1361.3
42.5°	1163.2	1179.4	1235.2	1282.0	1310.9
45°	1096.6	1114.6	1172.2	1228.0	1260.4
47.5°	1030.0	1051.6	1112.8	1174.0	1208.2
50°	961.5	983.1	1048.0	1118.2	1152.4
52.5°	893.1	918.3	990.3	1062.4	1096.6
55°	826.5	851.7	929.1	1004.7	1039.0
57.5°	758.1	783.3	867.9	947.1	981.3
60°	687.8	716.6	804.9	885.9	923.7
62.5°	619.4	650.0	743.7	830.1	866.1
65°	551.0	583.4	680.6	770.7	806.7
67.5°	480.8	518.6	619.4	711.2	749.1
70°	412.3	453.8	560.0	651.8	687.8
72.5°	345.7	390.7	500.6	594.2	615.8
75°	279.1	331.3	443.0	495.2	495.2
77.5°	216.1	273.7	378.1	397.9	408.7
80°	156.7	219.7	284.5	307.9	304.3
82.5°	104.4	167.5	203.5	203.5	198.1
85°	59.4	100.8	109.8	106.2	104.4
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)