

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: P230021

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P230021
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-L935-CD1-U
Description: CRUZE 2x4 LED TROFFER
WITH RIBBED LENS
Light Source: (84) 3500K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5132.0 lumens
Efficiency: N/A
Efficacy: 85.5 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

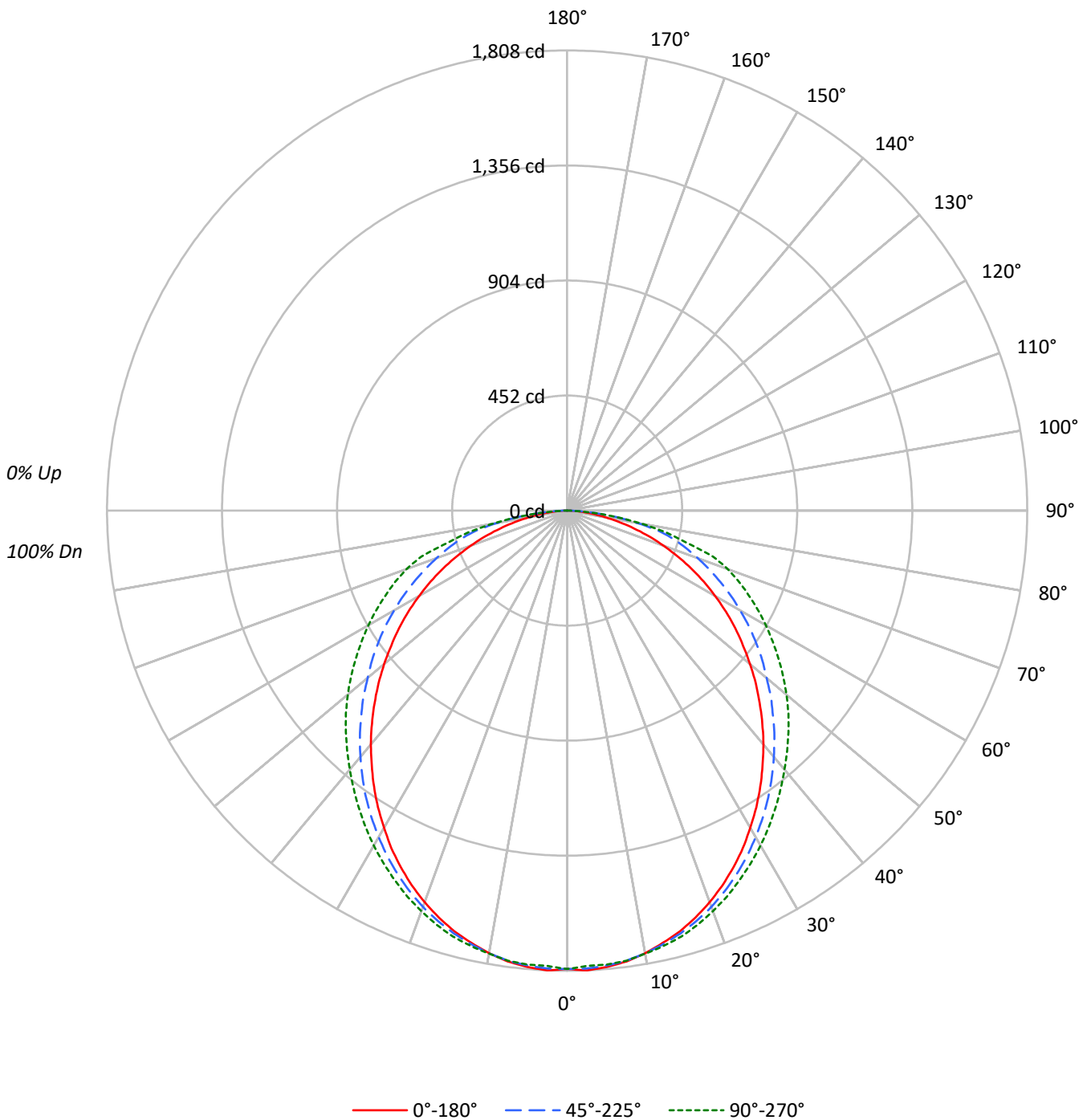
Input Watts (W): 60
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2423	2423	2423
5°	2430	2423	2418
10°	2413	2413	2415
15°	2384	2396	2413
20°	2345	2373	2398
25°	2296	2340	2379
30°	2236	2301	2361
35°	2173	2263	2344
40°	2108	2219	2333
45°	2036	2177	2340
50°	1964	2141	2354
55°	1892	2127	2378
60°	1806	2113	2426
65°	1712	2115	2506
70°	1583	2150	2640
75°	1416	2247	2512
80°	1185	2151	2301
85°	895	1655	1573



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	170.2	3.3
10°-20°	484.4	9.4
20°-30°	724.1	14.1
30°-40°	859.1	16.7
40°-50°	884.2	17.2
50°-60°	811.1	15.8
60°-70°	655.9	12.8
70°-80°	425.7	8.3
80°-90°	117.4	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°	1378.7	26.9
0°-40°	2237.8	43.6
0°-60°	3933.2	76.6
0°-90°	5132.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5132.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1801	1801	1801	1801	1801	
5°	1799	1787	1794	1792	1790	171
15°	1712	1704	1720	1727	1732	482
25°	1546	1548	1576	1590	1602	712
35°	1323	1334	1378	1408	1427	827
45°	1070	1088	1144	1198	1230	826
55°	806	831	907	980	1014	721
65°	538	569	664	752	787	531
75°	272	323	432	483	483	290
85°	58	98	107	104	102	71
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1801.1	1801.1	1801.1	1801.1	1801.1
2.5°	1808.1	1794.0	1801.1	1799.3	1790.5
5°	1799.3	1787.0	1794.0	1792.3	1790.5
7.5°	1787.0	1774.7	1783.5	1781.7	1783.5
10°	1765.9	1755.4	1765.9	1767.7	1767.7
12.5°	1739.6	1730.8	1744.8	1748.4	1751.9
15°	1711.5	1704.4	1720.2	1727.3	1732.5
17.5°	1676.3	1671.0	1690.4	1699.2	1706.2
20°	1637.7	1635.9	1657.0	1665.8	1674.6
22.5°	1593.7	1593.7	1618.3	1628.9	1641.2
25°	1546.3	1548.0	1576.2	1590.2	1602.5
27.5°	1495.3	1497.1	1530.5	1548.0	1562.1
30°	1439.1	1446.1	1481.3	1504.1	1519.9
32.5°	1382.9	1391.7	1430.3	1456.7	1474.2
35°	1323.1	1333.7	1377.6	1407.5	1426.8
37.5°	1261.6	1273.9	1321.4	1354.8	1377.6
40°	1200.1	1214.2	1263.4	1302.0	1328.4
42.5°	1135.1	1150.9	1205.4	1251.1	1279.2
45°	1070.1	1087.7	1143.9	1198.4	1230.0
47.5°	1005.1	1026.2	1085.9	1145.7	1179.0
50°	938.3	959.4	1022.7	1091.2	1124.6
52.5°	871.5	896.1	966.4	1036.7	1070.1
55°	806.5	831.1	906.7	980.5	1013.9
57.5°	739.8	764.4	846.9	924.3	957.6
60°	671.2	699.3	785.4	864.5	901.4
62.5°	604.5	634.3	725.7	810.0	845.2
65°	537.7	569.3	664.2	752.1	787.2
67.5°	469.2	506.1	604.5	694.1	731.0
70°	402.4	442.8	546.5	636.1	671.2
72.5°	337.4	381.3	488.5	579.9	600.9
75°	272.4	323.3	432.3	483.2	483.2
77.5°	210.9	267.1	369.0	388.3	398.9
80°	152.9	214.4	277.6	300.5	297.0
82.5°	101.9	163.4	198.6	198.6	193.3
85°	58.0	98.4	107.2	103.7	101.9
87.5°	24.6	36.9	33.4	26.4	22.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)