

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: P230077

Luminaire Tested: **24CZ-LD5-40SE-S-UNV-L935-CD1-U**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P230077
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-LD5-40SE-S-UNV-L935-CD1-U
Description: CRUZE 2x4 LED TROFFER
WITH SMOOTH LENS
Light Source: (84) 3500K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3530.0 lumens
Efficiency: N/A
Efficacy: 108.4 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

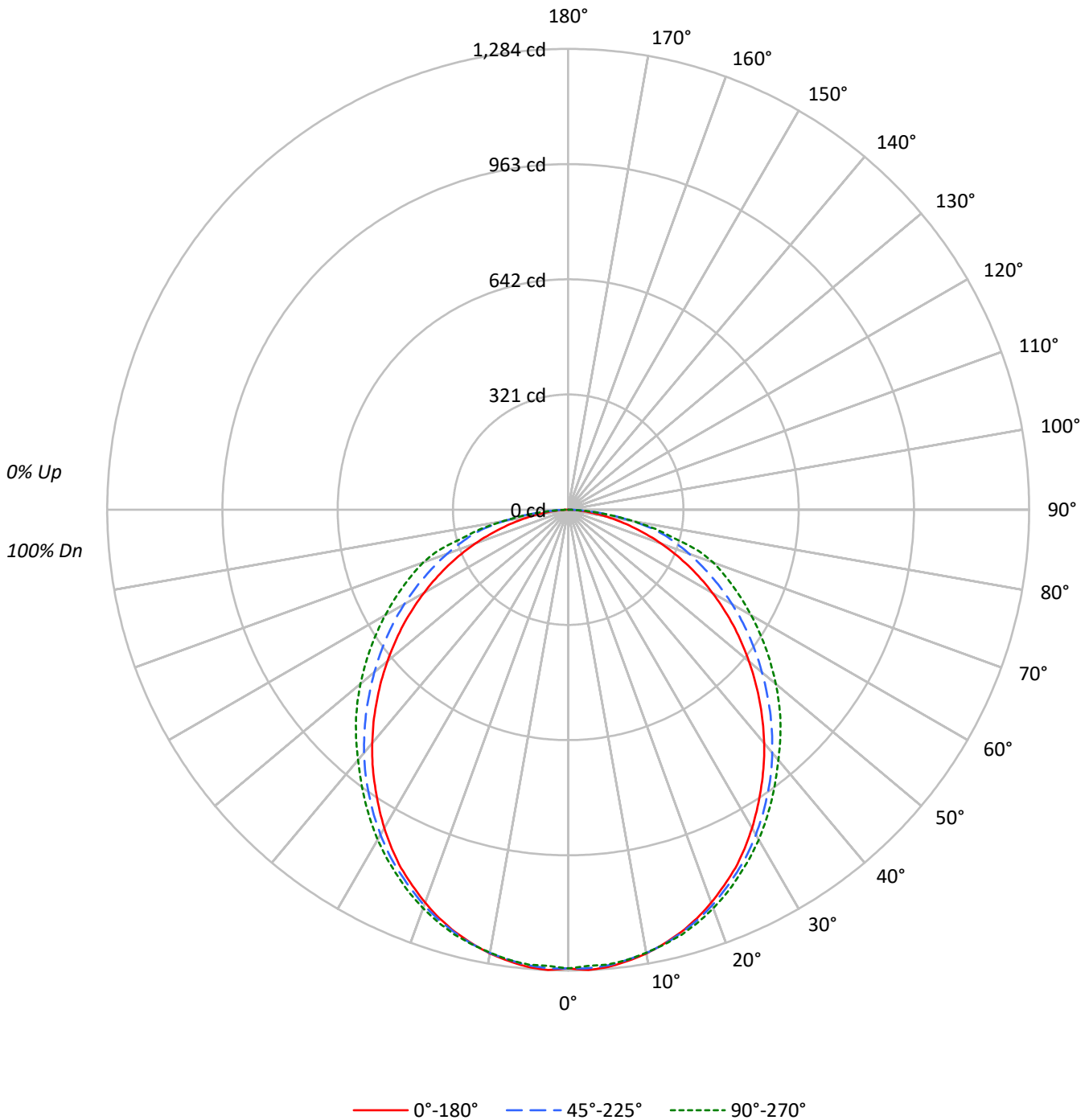
Input Watts (W): 32.55
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1719	1719	1719
5°	1728	1721	1718
10°	1715	1714	1712
15°	1697	1700	1707
20°	1668	1680	1692
25°	1636	1653	1670
30°	1591	1624	1650
35°	1542	1590	1623
40°	1492	1553	1599
45°	1435	1513	1591
50°	1377	1475	1581
55°	1317	1444	1576
60°	1249	1419	1584
65°	1174	1402	1615
70°	1081	1409	1691
75°	959	1459	1575
80°	801	1383	1420
85°	599	1105	1016



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	120.8	3.4
10°-20°	343.6	9.7
20°-30°	512.1	14.5
30°-40°	602.8	17.1
40°-50°	612.6	17.4
50°-60°	550.8	15.6
60°-70°	435.1	12.3
70°-80°	276.0	7.8
80°-90°	76.2	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
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0°-30°	976.5	27.7
0°-40°	1579.3	44.7
0°-60°	2742.7	77.7
0°-90°	3530.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3530.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1278	1278	1278	1278	1278	
5°	1279	1268	1274	1272	1272	121
15°	1218	1212	1220	1224	1225	343
25°	1102	1101	1114	1120	1125	507
35°	938	944	968	978	988	587
45°	754	765	795	819	836	582
55°	561	576	616	655	672	501
65°	369	388	440	489	507	365
75°	184	216	281	305	303	196
85°	39	67	72	66	66	48
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1277.9	1277.9	1277.9	1277.9	1277.9
2.5°	1283.8	1274.4	1279.1	1276.8	1272.1
5°	1279.1	1268.5	1274.4	1272.1	1272.1
7.5°	1268.5	1260.3	1265.0	1263.8	1265.0
10°	1255.6	1247.4	1254.4	1254.4	1253.3
12.5°	1238.0	1230.9	1239.2	1239.2	1240.3
15°	1218.0	1212.1	1220.4	1223.9	1225.1
17.5°	1193.4	1187.5	1198.1	1201.6	1205.1
20°	1165.2	1162.8	1173.4	1176.9	1181.6
22.5°	1133.5	1133.5	1144.0	1148.7	1155.8
25°	1101.7	1100.6	1113.5	1120.5	1125.2
27.5°	1064.2	1065.3	1081.8	1088.8	1094.7
30°	1024.2	1026.6	1045.4	1053.6	1061.8
32.5°	981.9	986.6	1007.8	1017.2	1025.4
35°	938.5	944.3	967.8	978.4	987.8
37.5°	895.0	903.2	927.9	938.5	949.0
40°	849.2	856.3	884.4	897.4	910.3
42.5°	802.2	811.6	839.8	858.6	873.9
45°	754.1	764.6	795.2	818.7	836.3
47.5°	705.9	720.0	749.4	781.1	796.4
50°	657.8	671.9	704.7	740.0	755.2
52.5°	608.4	622.5	660.1	696.5	713.0
55°	561.4	575.5	615.5	655.4	671.9
57.5°	512.1	527.4	572.0	613.1	629.6
60°	464.0	479.2	527.4	570.8	588.5
62.5°	417.0	433.4	483.9	529.7	547.3
65°	368.8	387.6	440.5	488.6	507.4
67.5°	321.8	343.0	398.2	448.7	468.7
70°	274.8	299.5	358.2	409.9	429.9
72.5°	229.0	256.1	318.3	370.0	380.6
75°	184.4	216.1	280.7	305.4	303.0
77.5°	142.1	177.4	238.4	243.1	250.2
80°	103.4	142.1	178.5	187.9	183.2
82.5°	68.1	106.9	128.0	123.3	122.2
85°	38.8	67.0	71.6	65.8	65.8
87.5°	16.4	27.0	23.5	17.6	16.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)