

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: P230037

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P230037
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-LD5-40-S-UNV-L935-CD1-U
Description: CRUZE 2x4 LED TROFFER
WITH SMOOTH LENS
Light Source: (168) 3500K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3481.0 lumens
Efficiency: N/A
Efficacy: 119.9 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

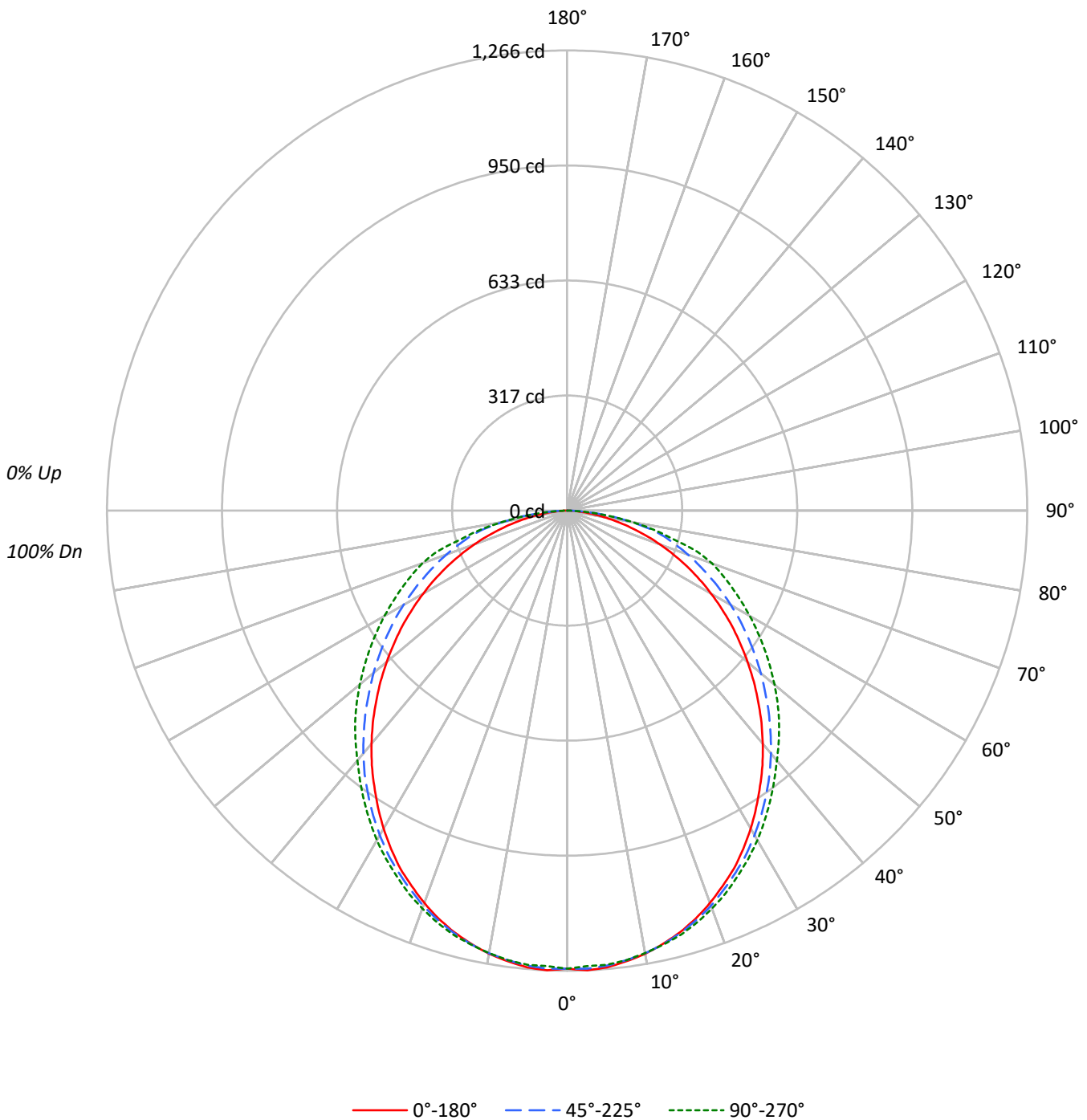
Input Watts (W): 29.04
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1696	1696	1696
5°	1704	1697	1694
10°	1692	1690	1689
15°	1673	1676	1683
20°	1645	1657	1668
25°	1613	1630	1647
30°	1569	1602	1627
35°	1520	1568	1600
40°	1471	1532	1577
45°	1415	1492	1569
50°	1358	1455	1559
55°	1299	1424	1554
60°	1231	1400	1562
65°	1158	1383	1593
70°	1066	1390	1668
75°	945	1439	1553
80°	790	1364	1400
85°	590	1091	1002



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	119.1	3.4
10°-20°	338.9	9.7
20°-30°	505.0	14.5
30°-40°	594.4	17.1
40°-50°	604.1	17.4
50°-60°	543.1	15.6
60°-70°	429.1	12.3
70°-80°	272.2	7.8
80°-90°	75.1	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°	963.0	27.7
0°-40°	1557.4	44.7
0°-60°	2704.6	77.7
0°-90°	3481.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3481.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1260	1260	1260	1260	1260	
5°	1261	1251	1257	1254	1254	120
15°	1201	1195	1203	1207	1208	338
25°	1086	1085	1098	1105	1110	500
35°	925	931	954	965	974	579
45°	744	754	784	807	825	574
55°	554	568	607	646	662	494
65°	364	382	434	482	500	360
75°	182	213	277	301	299	194
85°	38	66	71	65	65	47
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1260.2	1260.2	1260.2	1260.2	1260.2
2.5°	1266.0	1256.7	1261.3	1259.0	1254.4
5°	1261.3	1250.9	1256.7	1254.4	1254.4
7.5°	1250.9	1242.8	1247.4	1246.3	1247.4
10°	1238.2	1230.1	1237.0	1237.0	1235.9
12.5°	1220.8	1213.9	1222.0	1222.0	1223.1
15°	1201.1	1195.3	1203.4	1206.9	1208.1
17.5°	1176.8	1171.0	1181.4	1184.9	1188.4
20°	1149.0	1146.7	1157.1	1160.6	1165.2
22.5°	1117.7	1117.7	1128.1	1132.8	1139.7
25°	1086.4	1085.3	1098.0	1105.0	1109.6
27.5°	1049.4	1050.5	1066.8	1073.7	1079.5
30°	1010.0	1012.3	1030.9	1039.0	1047.1
32.5°	968.3	972.9	993.8	1003.1	1011.2
35°	925.4	931.2	954.4	964.8	974.1
37.5°	882.6	890.7	915.0	925.4	935.9
40°	837.4	844.4	872.2	884.9	897.7
42.5°	791.1	800.4	828.2	846.7	861.7
45°	743.6	754.0	784.1	807.3	824.7
47.5°	696.1	710.0	739.0	770.2	785.3
50°	648.6	662.5	695.0	729.7	744.8
52.5°	600.0	613.9	650.9	686.8	703.1
55°	553.6	567.5	606.9	646.3	662.5
57.5°	505.0	520.1	564.1	604.6	620.8
60°	457.5	472.6	520.1	562.9	580.3
62.5°	411.2	427.4	477.2	522.4	539.7
65°	363.7	382.2	434.3	481.8	500.4
67.5°	317.4	338.2	392.6	442.5	462.1
70°	271.0	295.4	353.3	404.2	423.9
72.5°	225.9	252.5	313.9	364.9	375.3
75°	181.8	213.1	276.8	301.1	298.8
77.5°	140.1	174.9	235.1	239.8	246.7
80°	101.9	140.1	176.1	185.3	180.7
82.5°	67.2	105.4	126.3	121.6	120.5
85°	38.2	66.0	70.7	64.9	64.9
87.5°	16.2	26.6	23.2	17.4	16.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)