

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: P230076

Luminaire Tested: **24CZ-LD5-40SE-S-UNV-L930-CD1-U**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P230076
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-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: 3396.0 lumens
Efficiency: N/A
Efficacy: 104.3 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

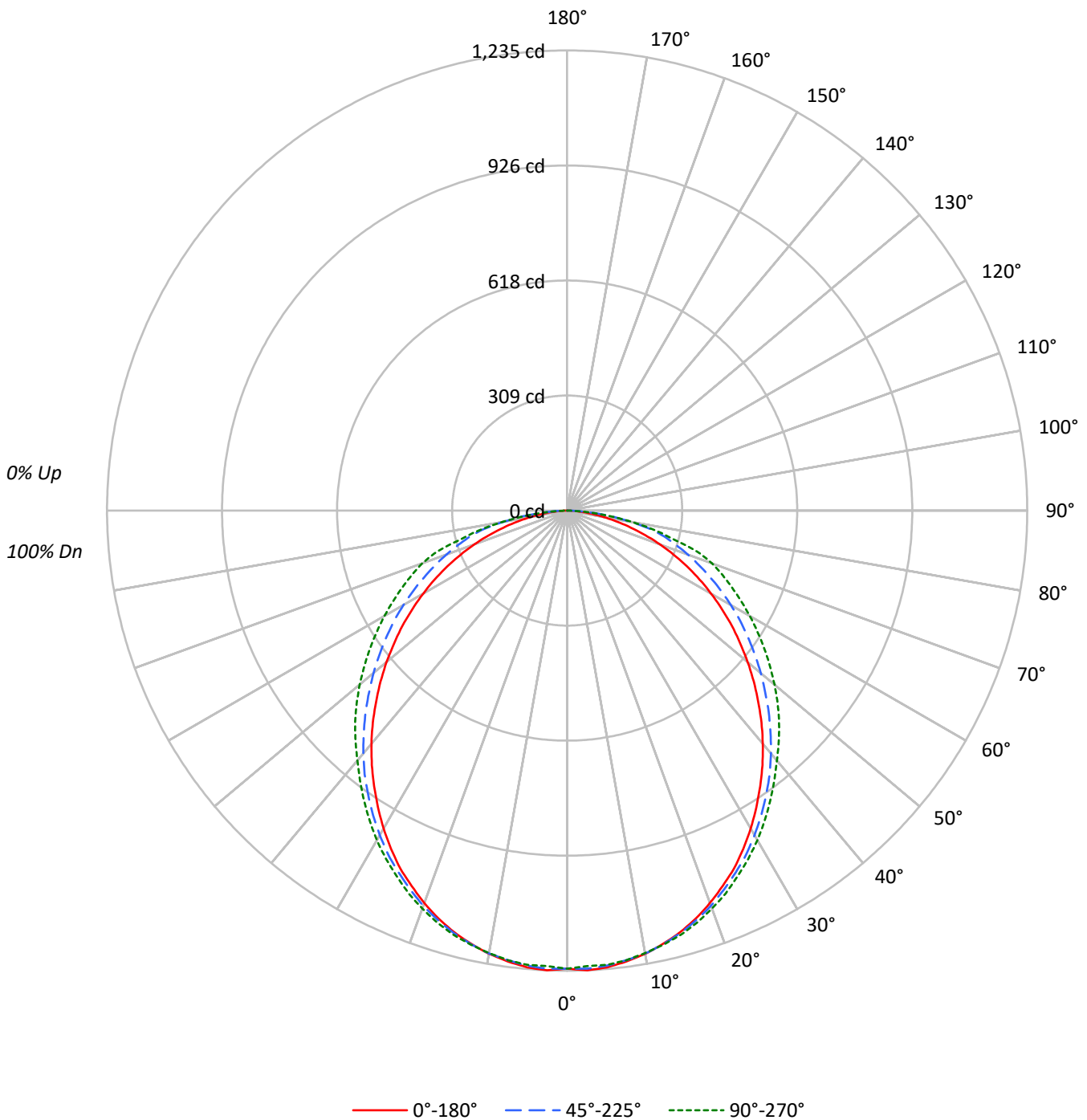
Input Watts (W): 32.55
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1654	1654	1654
5°	1662	1656	1653
10°	1650	1649	1647
15°	1632	1635	1642
20°	1605	1616	1628
25°	1574	1590	1607
30°	1531	1562	1587
35°	1483	1529	1561
40°	1435	1495	1538
45°	1380	1456	1531
50°	1325	1419	1521
55°	1267	1389	1516
60°	1201	1365	1523
65°	1130	1349	1554
70°	1040	1356	1627
75°	922	1404	1515
80°	770	1331	1366
85°	576	1064	977



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	116.2	3.4
10°-20°	330.6	9.7
20°-30°	492.6	14.5
30°-40°	579.9	17.1
40°-50°	589.3	17.4
50°-60°	529.8	15.6
60°-70°	418.6	12.3
70°-80°	265.5	7.8
80°-90°	73.3	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°	939.5	27.7
0°-40°	1519.4	44.7
0°-60°	2638.6	77.7
0°-90°	3396.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3396.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1229	1229	1229	1229	1229	
5°	1230	1220	1226	1224	1224	117
15°	1172	1166	1174	1177	1179	330
25°	1060	1059	1071	1078	1082	487
35°	903	908	931	941	950	565
45°	725	736	765	788	804	560
55°	540	554	592	630	646	482
65°	355	373	424	470	488	351
75°	177	208	270	294	292	189
85°	37	64	69	63	63	46
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1229.4	1229.4	1229.4	1229.4	1229.4
2.5°	1235.1	1226.0	1230.5	1228.3	1223.8
5°	1230.5	1220.4	1226.0	1223.8	1223.8
7.5°	1220.4	1212.5	1217.0	1215.9	1217.0
10°	1207.9	1200.0	1206.8	1206.8	1205.7
12.5°	1191.0	1184.2	1192.1	1192.1	1193.3
15°	1171.8	1166.1	1174.0	1177.4	1178.6
17.5°	1148.1	1142.4	1152.6	1156.0	1159.4
20°	1120.9	1118.7	1128.8	1132.2	1136.8
22.5°	1090.4	1090.4	1100.6	1105.1	1111.9
25°	1059.9	1058.8	1071.2	1078.0	1082.5
27.5°	1023.8	1024.9	1040.7	1047.5	1053.1
30°	985.3	987.6	1005.7	1013.6	1021.5
32.5°	944.7	949.2	969.5	978.6	986.5
35°	902.9	908.5	931.1	941.3	950.3
37.5°	861.0	869.0	892.7	902.9	913.0
40°	817.0	823.8	850.9	863.3	875.7
42.5°	771.8	780.8	807.9	826.0	840.7
45°	725.4	735.6	765.0	787.6	804.5
47.5°	679.1	692.7	720.9	751.4	766.1
50°	632.8	646.3	678.0	711.9	726.6
52.5°	585.3	598.9	635.0	670.1	685.9
55°	540.1	553.7	592.1	630.5	646.3
57.5°	492.7	507.4	550.3	589.8	605.7
60°	446.3	461.0	507.4	549.2	566.1
62.5°	401.1	417.0	465.6	509.6	526.6
65°	354.8	372.9	423.7	470.1	488.1
67.5°	309.6	330.0	383.1	431.7	450.9
70°	264.4	288.1	344.6	394.4	413.6
72.5°	220.3	246.3	306.2	355.9	366.1
75°	177.4	207.9	270.1	293.8	291.5
77.5°	136.7	170.6	229.4	233.9	240.7
80°	99.4	136.7	171.8	180.8	176.3
82.5°	65.5	102.8	123.2	118.6	117.5
85°	37.3	64.4	68.9	63.3	63.3
87.5°	15.8	26.0	22.6	16.9	15.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)