

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: P230038

Luminaire Tested: **24CZ-LD5-40-S-UNV-L940-CD1-U**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P230038
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-L940-CD1-U
Description: CRUZE 2x4 LED TROFFER
WITH SMOOTH LENS
Light Source: (168) 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

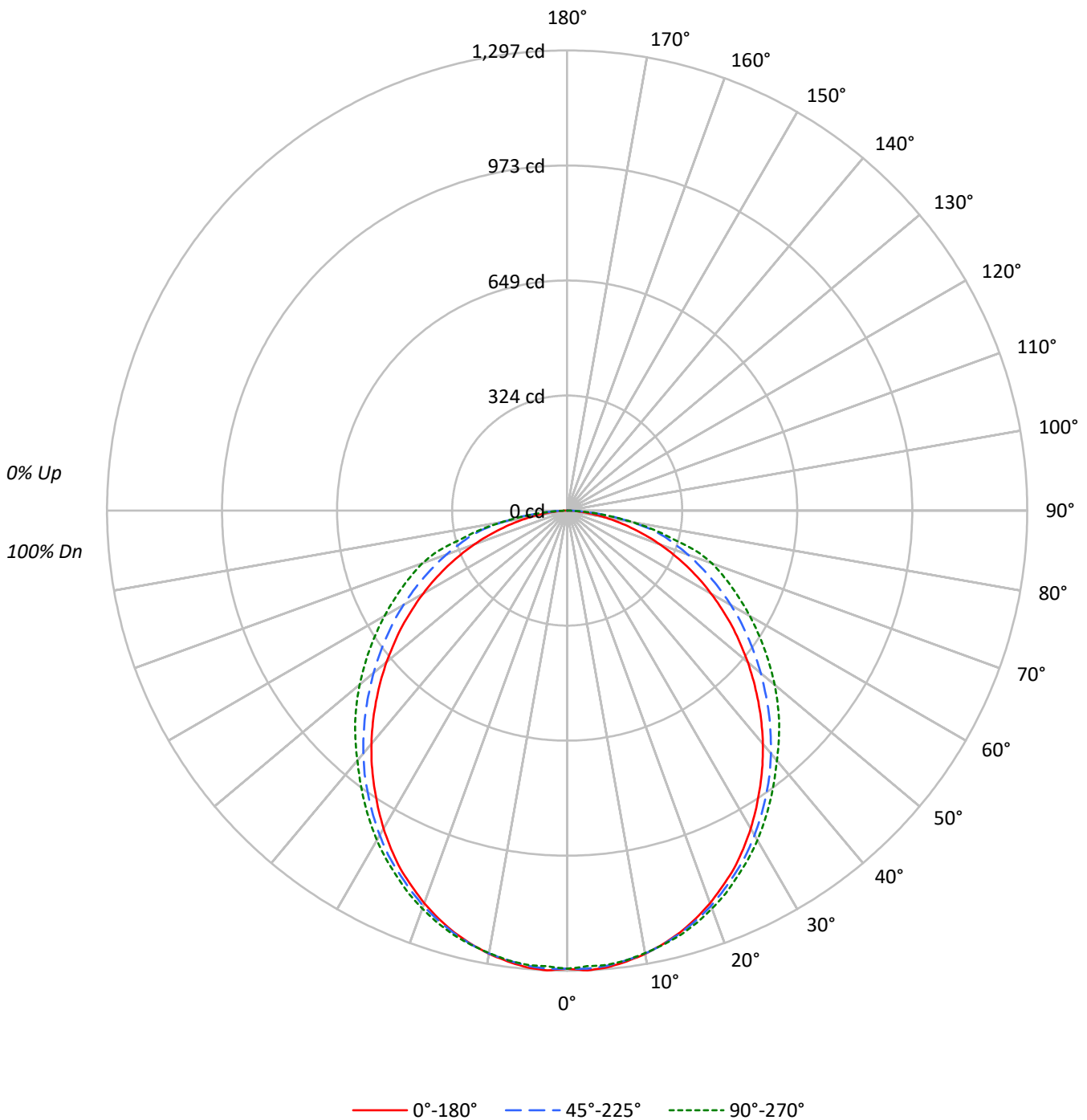
Lumens per Lamp: N/A
Luminaire Lumens: 3567.0 lumens
Efficiency: N/A
Efficacy: 122.8 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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°	1737	1737	1737
5°	1746	1739	1736
10°	1733	1732	1730
15°	1714	1718	1724
20°	1686	1698	1710
25°	1653	1670	1688
30°	1608	1641	1667
35°	1558	1606	1640
40°	1507	1570	1616
45°	1450	1529	1608
50°	1391	1491	1598
55°	1331	1459	1593
60°	1262	1434	1600
65°	1187	1417	1632
70°	1092	1424	1709
75°	968	1475	1592
80°	809	1398	1435
85°	605	1118	1027



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	122.1	3.4
10°-20°	347.2	9.7
20°-30°	517.5	14.5
30°-40°	609.1	17.1
40°-50°	619.0	17.4
50°-60°	556.5	15.6
60°-70°	439.7	12.3
70°-80°	278.9	7.8
80°-90°	77.0	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°	986.8	27.7
0°-40°	1595.9	44.7
0°-60°	2771.4	77.7
0°-90°	3567.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3567.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1291	1291	1291	1291	1291	
5°	1292	1282	1288	1285	1285	123
15°	1231	1225	1233	1237	1238	347
25°	1113	1112	1125	1132	1137	512
35°	948	954	978	989	998	593
45°	762	773	804	827	845	588
55°	567	582	622	662	679	507
65°	373	392	445	494	513	369
75°	186	218	284	309	306	198
85°	39	68	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°	1291.3	1291.3	1291.3	1291.3	1291.3
2.5°	1297.3	1287.8	1292.5	1290.1	1285.4
5°	1292.5	1281.8	1287.8	1285.4	1285.4
7.5°	1281.8	1273.5	1278.3	1277.1	1278.3
10°	1268.8	1260.5	1267.6	1267.6	1266.4
12.5°	1251.0	1243.8	1252.2	1252.2	1253.3
15°	1230.8	1224.9	1233.2	1236.7	1237.9
17.5°	1205.9	1199.9	1210.6	1214.2	1217.7
20°	1177.4	1175.0	1185.7	1189.2	1194.0
22.5°	1145.3	1145.3	1156.0	1160.8	1167.9
25°	1113.3	1112.1	1125.2	1132.3	1137.0
27.5°	1075.3	1076.5	1093.1	1100.2	1106.2
30°	1035.0	1037.3	1056.3	1064.6	1072.9
32.5°	992.2	997.0	1018.3	1027.8	1036.1
35°	948.3	954.2	978.0	988.7	998.2
37.5°	904.4	912.7	937.6	948.3	959.0
40°	858.1	865.2	893.7	906.8	919.8
42.5°	810.6	820.1	848.6	867.6	883.0
45°	762.0	772.7	803.5	827.3	845.1
47.5°	713.3	727.6	757.2	789.3	804.7
50°	664.6	678.9	712.1	747.7	763.2
52.5°	614.8	629.0	667.0	703.8	720.4
55°	567.3	581.6	621.9	662.3	678.9
57.5°	517.5	532.9	578.0	619.5	636.2
60°	468.8	484.2	532.9	576.8	594.6
62.5°	421.3	438.0	489.0	535.3	553.1
65°	372.7	391.7	445.1	493.7	512.7
67.5°	325.2	346.6	402.4	453.4	473.6
70°	277.7	302.7	362.0	414.2	434.4
72.5°	231.4	258.7	321.6	373.9	384.5
75°	186.3	218.4	283.7	308.6	306.2
77.5°	143.6	179.2	240.9	245.7	252.8
80°	104.4	143.6	180.4	189.9	185.2
82.5°	68.8	108.0	129.4	124.6	123.4
85°	39.2	67.7	72.4	66.5	66.5
87.5°	16.6	27.3	23.7	17.8	16.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)