

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: P230009

Luminaire Tested: **24CZ-LD5-45SE-UNV-L935-CD1-U**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P230009
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-LD5-45SE-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: 3936.0 lumens
Efficiency: N/A
Efficacy: 98.6 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

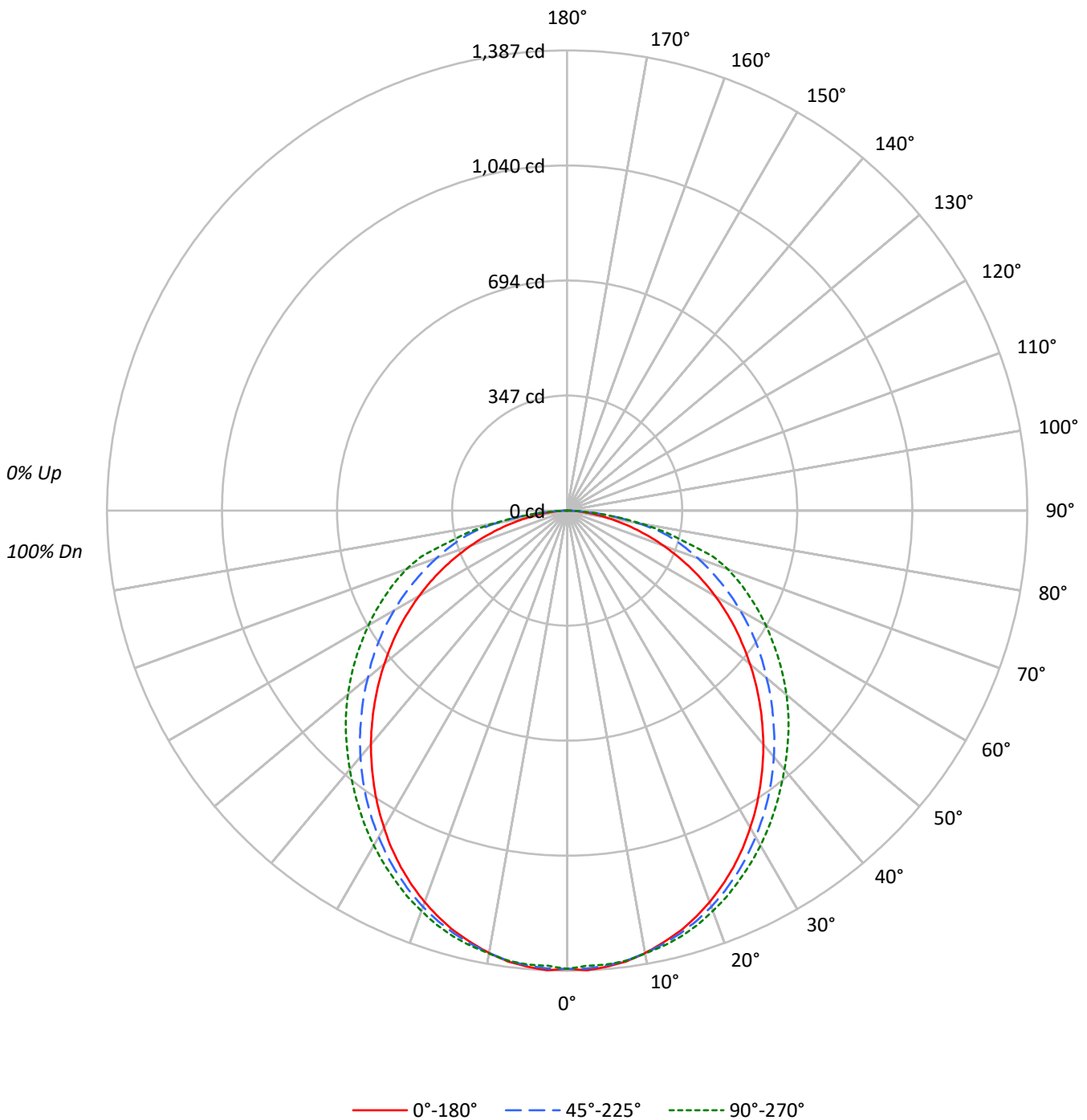
Input Watts (W): 39.91
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	1859	1859	1859
5°	1864	1858	1855
10°	1850	1850	1852
15°	1828	1838	1851
20°	1798	1820	1839
25°	1761	1795	1825
30°	1715	1765	1811
35°	1667	1736	1797
40°	1617	1702	1789
45°	1562	1669	1795
50°	1506	1642	1805
55°	1451	1631	1824
60°	1385	1621	1860
65°	1313	1622	1922
70°	1214	1649	2025
75°	1086	1723	1927
80°	908	1650	1765
85°	687	1269	1207



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	130.5	3.3
10°-20°	371.5	9.4
20°-30°	555.4	14.1
30°-40°	658.9	16.7
40°-50°	678.1	17.2
50°-60°	622.1	15.8
60°-70°	503.0	12.8
70°-80°	326.4	8.3
80°-90°	90.0	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°	1057.4	26.9
0°-40°	1716.3	43.6
0°-60°	3016.5	76.6
0°-90°	3936.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3936.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1381	1381	1381	1381	1381	
5°	1380	1371	1376	1375	1373	131
15°	1313	1307	1319	1325	1329	370
25°	1186	1187	1209	1220	1229	546
35°	1015	1023	1057	1080	1094	635
45°	821	834	877	919	943	633
55°	619	637	695	752	778	553
65°	412	437	509	577	604	408
75°	209	248	332	371	371	222
85°	44	76	82	80	78	54
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1381.3	1381.3	1381.3	1381.3	1381.3
2.5°	1386.7	1375.9	1381.3	1380.0	1373.2
5°	1380.0	1370.6	1375.9	1374.6	1373.2
7.5°	1370.6	1361.1	1367.9	1366.5	1367.9
10°	1354.4	1346.3	1354.4	1355.7	1355.7
12.5°	1334.2	1327.4	1338.2	1340.9	1343.6
15°	1312.6	1307.2	1319.3	1324.7	1328.8
17.5°	1285.6	1281.6	1296.4	1303.2	1308.6
20°	1256.0	1254.7	1270.8	1277.6	1284.3
22.5°	1222.3	1222.3	1241.2	1249.3	1258.7
25°	1185.9	1187.3	1208.8	1219.6	1229.0
27.5°	1146.8	1148.2	1173.8	1187.3	1198.1
30°	1103.7	1109.1	1136.1	1153.6	1165.7
32.5°	1060.6	1067.3	1097.0	1117.2	1130.7
35°	1014.8	1022.9	1056.6	1079.5	1094.3
37.5°	967.6	977.0	1013.4	1039.0	1056.6
40°	920.4	931.2	969.0	998.6	1018.8
42.5°	870.6	882.7	924.5	959.5	981.1
45°	820.7	834.2	877.3	919.1	943.3
47.5°	770.9	787.0	832.8	878.7	904.3
50°	719.6	735.8	784.3	836.9	862.5
52.5°	668.4	687.3	741.2	795.1	820.7
55°	618.6	637.4	695.4	752.0	777.6
57.5°	567.4	586.2	649.6	708.9	734.5
60°	514.8	536.4	602.4	663.0	691.3
62.5°	463.6	486.5	556.6	621.3	648.2
65°	412.4	436.6	509.4	576.8	603.7
67.5°	359.8	388.1	463.6	532.3	560.6
70°	308.6	339.6	419.1	487.8	514.8
72.5°	258.7	292.4	374.6	444.7	460.9
75°	208.9	248.0	331.5	370.6	370.6
77.5°	161.7	204.8	283.0	297.8	305.9
80°	117.2	164.4	212.9	230.4	227.8
82.5°	78.2	125.3	152.3	152.3	148.2
85°	44.5	75.5	82.2	79.5	78.2
87.5°	18.9	28.3	25.6	20.2	17.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)