

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: P230042

Luminaire Tested: **24CZ-LD5-45-S-UNV-L940-CD1-U**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P230042
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-LD5-45-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: 4022.0 lumens
Efficiency: N/A
Efficacy: 112.7 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

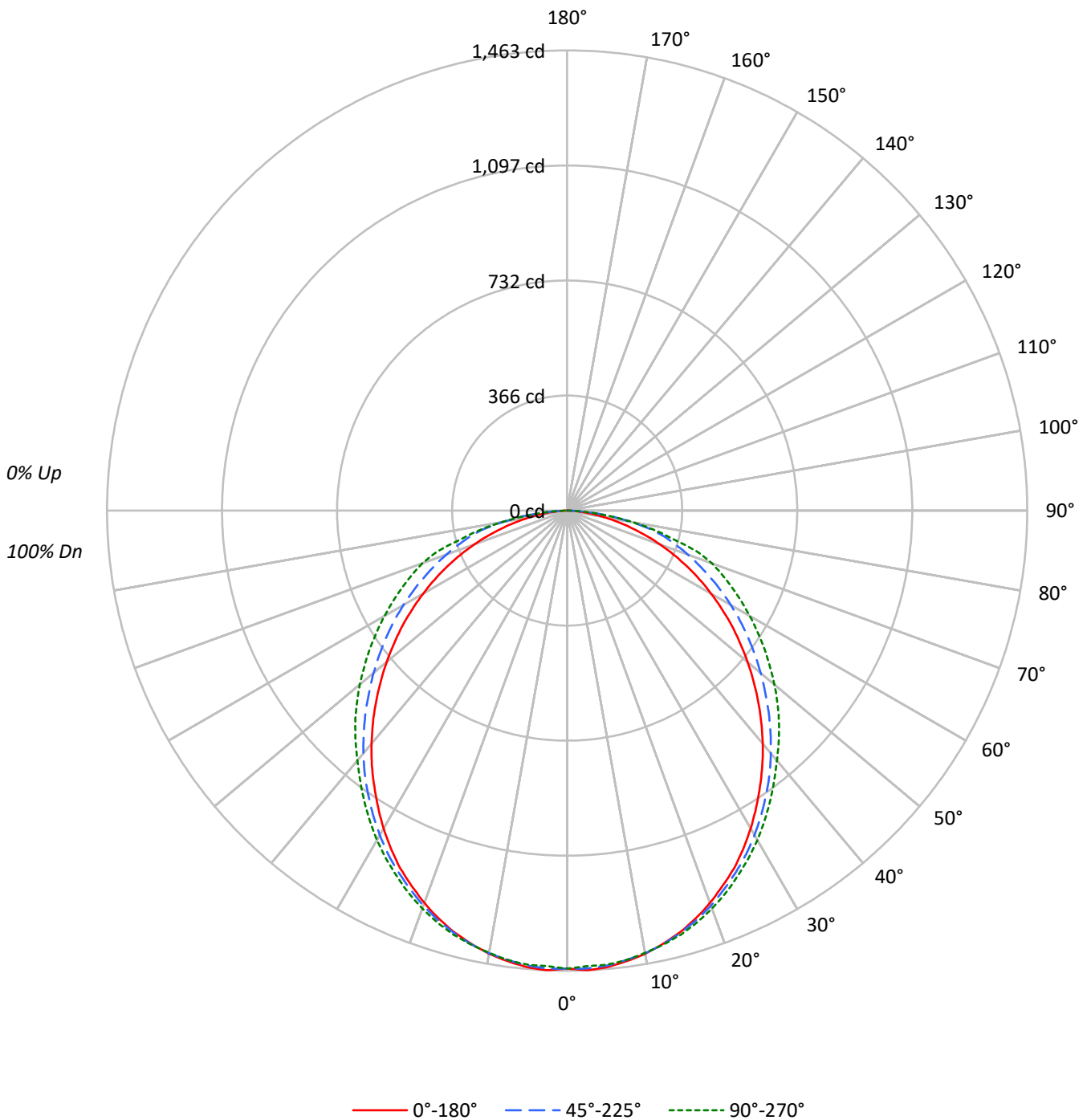
Input Watts (W): 35.69
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1959	1959	1959
5°	1968	1961	1957
10°	1955	1953	1951
15°	1933	1937	1944
20°	1901	1914	1928
25°	1864	1883	1903
30°	1813	1851	1880
35°	1756	1811	1849
40°	1700	1770	1822
45°	1635	1724	1813
50°	1569	1681	1801
55°	1501	1645	1796
60°	1422	1617	1804
65°	1338	1598	1840
70°	1232	1606	1927
75°	1092	1663	1795
80°	913	1576	1618
85°	682	1260	1156



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	137.7	3.4
10°-20°	391.5	9.7
20°-30°	583.5	14.5
30°-40°	686.8	17.1
40°-50°	698.0	17.4
50°-60°	627.5	15.6
60°-70°	495.8	12.3
70°-80°	314.5	7.8
80°-90°	86.8	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°	1112.6	27.7
0°-40°	1799.5	44.7
0°-60°	3124.9	77.7
0°-90°	4022.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4022.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1456	1456	1456	1456	1456	
5°	1457	1445	1452	1449	1449	138
15°	1388	1381	1390	1394	1396	391
25°	1255	1254	1269	1277	1282	577
35°	1069	1076	1103	1115	1126	669
45°	859	871	906	933	953	663
55°	640	656	701	747	766	571
65°	420	442	502	557	578	416
75°	210	246	320	348	345	224
85°	44	76	82	75	75	54
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1456.0	1456.0	1456.0	1456.0	1456.0
2.5°	1462.7	1452.0	1457.4	1454.7	1449.3
5°	1457.4	1445.3	1452.0	1449.3	1449.3
7.5°	1445.3	1436.0	1441.3	1440.0	1441.3
10°	1430.6	1421.2	1429.3	1429.3	1427.9
12.5°	1410.5	1402.5	1411.9	1411.9	1413.2
15°	1387.8	1381.1	1390.5	1394.5	1395.8
17.5°	1359.7	1353.0	1365.0	1369.1	1373.1
20°	1327.6	1324.9	1336.9	1340.9	1346.3
22.5°	1291.4	1291.4	1303.5	1308.8	1316.9
25°	1255.3	1254.0	1268.7	1276.7	1282.1
27.5°	1212.5	1213.8	1232.5	1240.6	1247.3
30°	1167.0	1169.6	1191.1	1200.4	1209.8
32.5°	1118.8	1124.1	1148.2	1158.9	1168.3
35°	1069.3	1076.0	1102.7	1114.8	1125.5
37.5°	1019.8	1029.1	1057.2	1069.3	1081.3
40°	967.6	975.6	1007.7	1022.4	1037.2
42.5°	914.0	924.7	956.9	978.3	995.7
45°	859.2	871.2	906.0	932.8	952.8
47.5°	804.3	820.4	853.8	889.9	907.3
50°	749.4	765.5	803.0	843.1	860.5
52.5°	693.2	709.3	752.1	793.6	812.3
55°	639.7	655.8	701.3	746.8	765.5
57.5°	583.5	600.9	651.7	698.6	717.3
60°	528.6	546.0	600.9	650.4	670.5
62.5°	475.1	493.8	551.4	603.6	623.6
65°	420.2	441.6	501.9	556.7	578.1
67.5°	366.7	390.8	453.7	511.2	534.0
70°	313.2	341.3	408.2	467.1	489.8
72.5°	261.0	291.7	362.7	421.6	433.6
75°	210.1	246.2	319.8	348.0	345.3
77.5°	161.9	202.1	271.7	277.0	285.1
80°	117.8	161.9	203.4	214.1	208.8
82.5°	77.6	121.8	145.9	140.5	139.2
85°	44.2	76.3	81.6	74.9	74.9
87.5°	18.7	30.8	26.8	20.1	18.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)