

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: P229970

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P229970
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-LD5-45-UNV-L940-CD1-U
Description: CRUZE 2x4 LED TROFFER
WITH RIBBED LENS
Light Source: (168) 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3943.0 lumens
Efficiency: N/A
Efficacy: 110.5 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

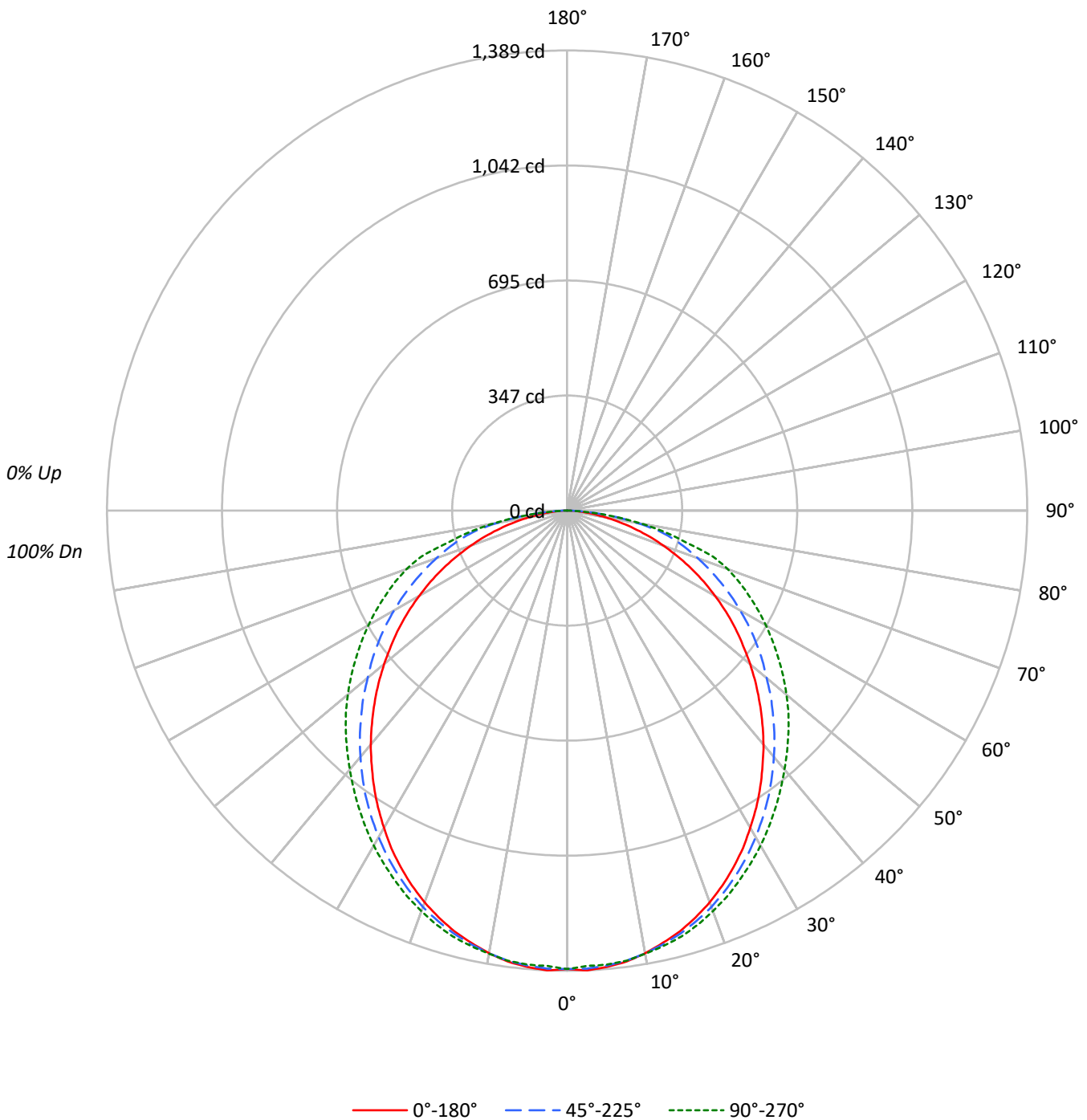
Input Watts (W): 35.69
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	1862	1862	1862
5°	1867	1862	1858
10°	1854	1854	1855
15°	1832	1841	1854
20°	1802	1823	1842
25°	1764	1798	1828
30°	1718	1768	1814
35°	1670	1738	1801
40°	1620	1705	1793
45°	1564	1672	1798
50°	1509	1645	1809
55°	1454	1634	1827
60°	1388	1624	1864
65°	1315	1625	1926
70°	1216	1652	2029
75°	1088	1726	1930
80°	910	1653	1768
85°	689	1272	1209



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	130.8	3.3
10°-20°	372.2	9.4
20°-30°	556.4	14.1
30°-40°	660.0	16.7
40°-50°	679.3	17.2
50°-60°	623.2	15.8
60°-70°	503.9	12.8
70°-80°	327.0	8.3
80°-90°	90.2	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°	1059.3	26.9
0°-40°	1719.3	43.6
0°-60°	3021.9	76.6
0°-90°	3943.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3943.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1384	1384	1384	1384	1384	
5°	1382	1373	1378	1377	1376	131
15°	1315	1310	1322	1327	1331	370
25°	1188	1189	1211	1222	1231	547
35°	1017	1025	1058	1081	1096	636
45°	822	836	879	921	945	634
55°	620	639	697	753	779	554
65°	413	437	510	578	605	408
75°	209	248	332	371	371	222
85°	45	76	82	80	78	55
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1383.8	1383.8	1383.8	1383.8	1383.8
2.5°	1389.2	1378.4	1383.8	1382.4	1375.7
5°	1382.4	1373.0	1378.4	1377.0	1375.7
7.5°	1373.0	1363.5	1370.3	1368.9	1370.3
10°	1356.8	1348.7	1356.8	1358.1	1358.1
12.5°	1336.5	1329.8	1340.6	1343.3	1346.0
15°	1314.9	1309.5	1321.7	1327.1	1331.1
17.5°	1287.9	1283.9	1298.7	1305.5	1310.9
20°	1258.2	1256.9	1273.1	1279.8	1286.6
22.5°	1224.5	1224.5	1243.4	1251.5	1260.9
25°	1188.0	1189.4	1211.0	1221.8	1231.2
27.5°	1148.9	1150.2	1175.9	1189.4	1200.2
30°	1105.7	1111.1	1138.1	1155.6	1167.8
32.5°	1062.5	1069.2	1098.9	1119.2	1132.7
35°	1016.6	1024.7	1058.4	1081.4	1096.2
37.5°	969.3	978.8	1015.2	1040.9	1058.4
40°	922.1	932.9	970.7	1000.4	1020.6
42.5°	872.1	884.3	926.1	961.2	982.8
45°	822.2	835.7	878.9	920.7	945.0
47.5°	772.2	788.4	834.3	880.2	905.9
50°	720.9	737.1	785.7	838.4	864.0
52.5°	669.6	688.5	742.5	796.5	822.2
55°	619.7	638.6	696.6	753.3	779.0
57.5°	568.4	587.3	650.7	710.1	735.8
60°	515.7	537.3	603.5	664.2	692.6
62.5°	464.4	487.4	557.6	622.4	649.4
65°	413.1	437.4	510.3	577.8	604.8
67.5°	360.5	388.8	464.4	533.3	561.6
70°	309.2	340.2	419.9	488.7	515.7
72.5°	259.2	293.0	375.3	445.5	461.7
75°	209.3	248.4	332.1	371.3	371.3
77.5°	162.0	205.2	283.5	298.4	306.5
80°	117.5	164.7	213.3	230.9	228.2
82.5°	78.3	125.6	152.6	152.6	148.5
85°	44.6	75.6	82.4	79.7	78.3
87.5°	18.9	28.4	25.7	20.3	17.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)