

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: P229969

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P229969
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-L935-CD1-U
Description: CRUZE 2x4 LED TROFFER
WITH RIBBED LENS
Light Source: (168) 3500K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3848.0 lumens
Efficiency: N/A
Efficacy: 107.8 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

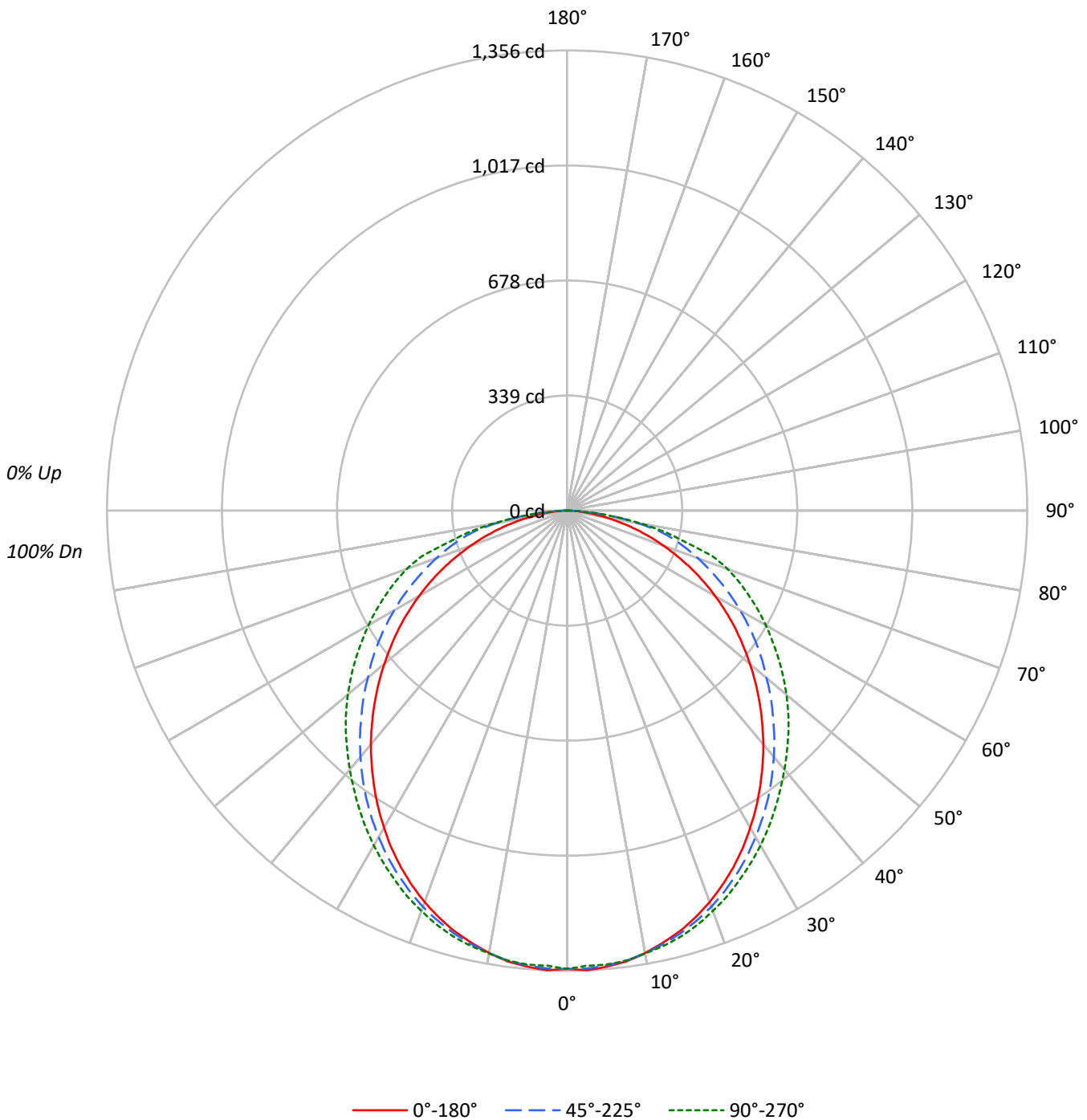
Input Watts (W): 35.69
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1817	1817	1817
5°	1822	1817	1813
10°	1809	1809	1811
15°	1788	1797	1810
20°	1758	1779	1798
25°	1721	1754	1784
30°	1676	1726	1771
35°	1630	1697	1757
40°	1581	1664	1749
45°	1527	1632	1755
50°	1473	1605	1765
55°	1418	1595	1783
60°	1354	1585	1819
65°	1284	1585	1879
70°	1187	1612	1980
75°	1062	1685	1883
80°	888	1613	1726
85°	672	1241	1179



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	127.6	3.3
10°-20°	363.2	9.4
20°-30°	543.0	14.1
30°-40°	644.1	16.7
40°-50°	663.0	17.2
50°-60°	608.2	15.8
60°-70°	491.7	12.8
70°-80°	319.2	8.3
80°-90°	88.0	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°	1033.8	26.9
0°-40°	1677.9	43.6
0°-60°	2949.1	76.6
0°-90°	3848.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3848.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1350	1350	1350	1350	1350	
5°	1349	1340	1345	1344	1342	128
15°	1283	1278	1290	1295	1299	361
25°	1159	1161	1182	1192	1202	534
35°	992	1000	1033	1055	1070	620
45°	802	816	858	898	922	619
55°	605	623	680	735	760	540
65°	403	427	498	564	590	398
75°	204	242	324	362	362	217
85°	44	74	80	78	76	53
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1350.4	1350.4	1350.4	1350.4	1350.4
2.5°	1355.7	1345.2	1350.4	1349.1	1342.5
5°	1349.1	1339.9	1345.2	1343.9	1342.5
7.5°	1339.9	1330.7	1337.3	1336.0	1337.3
10°	1324.1	1316.2	1324.1	1325.4	1325.4
12.5°	1304.3	1297.7	1308.3	1310.9	1313.6
15°	1283.3	1278.0	1289.8	1295.1	1299.1
17.5°	1256.9	1253.0	1267.4	1274.0	1279.3
20°	1227.9	1226.6	1242.4	1249.0	1255.6
22.5°	1195.0	1195.0	1213.4	1221.3	1230.6
25°	1159.4	1160.7	1181.8	1192.3	1201.6
27.5°	1121.2	1122.5	1147.6	1160.7	1171.3
30°	1079.0	1084.3	1110.7	1127.8	1139.6
32.5°	1036.9	1043.5	1072.5	1092.2	1105.4
35°	992.1	1000.0	1032.9	1055.3	1069.8
37.5°	946.0	955.2	990.8	1015.8	1032.9
40°	899.9	910.4	947.3	976.3	996.0
42.5°	851.1	863.0	903.8	938.1	959.1
45°	802.4	815.5	857.7	898.5	922.3
47.5°	753.6	769.4	814.2	859.0	884.0
50°	703.6	719.4	766.8	818.2	843.2
52.5°	653.5	671.9	724.6	777.3	802.4
55°	604.7	623.2	679.8	735.2	760.2
57.5°	554.7	573.1	635.0	693.0	718.0
60°	503.3	524.4	588.9	648.2	675.9
62.5°	453.2	475.6	544.1	607.4	633.7
65°	403.2	426.9	498.0	563.9	590.2
67.5°	351.8	379.4	453.2	520.4	548.1
70°	301.7	332.0	409.7	476.9	503.3
72.5°	253.0	285.9	366.3	434.8	450.6
75°	204.2	242.4	324.1	362.3	362.3
77.5°	158.1	200.3	276.7	291.2	299.1
80°	114.6	160.7	208.2	225.3	222.7
82.5°	76.4	122.5	148.9	148.9	144.9
85°	43.5	73.8	80.4	77.7	76.4
87.5°	18.4	27.7	25.0	19.8	17.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)