

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: P229971

Luminaire Tested: **24CZ-LD5-45-UNV-L950-CD1-U**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P229971
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-L950-CD1-U
Description: CRUZE 2x4 LED TROFFER
WITH RIBBED LENS
Light Source: (168) 5000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4290.0 lumens
Efficiency: N/A
Efficacy: 120.2 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

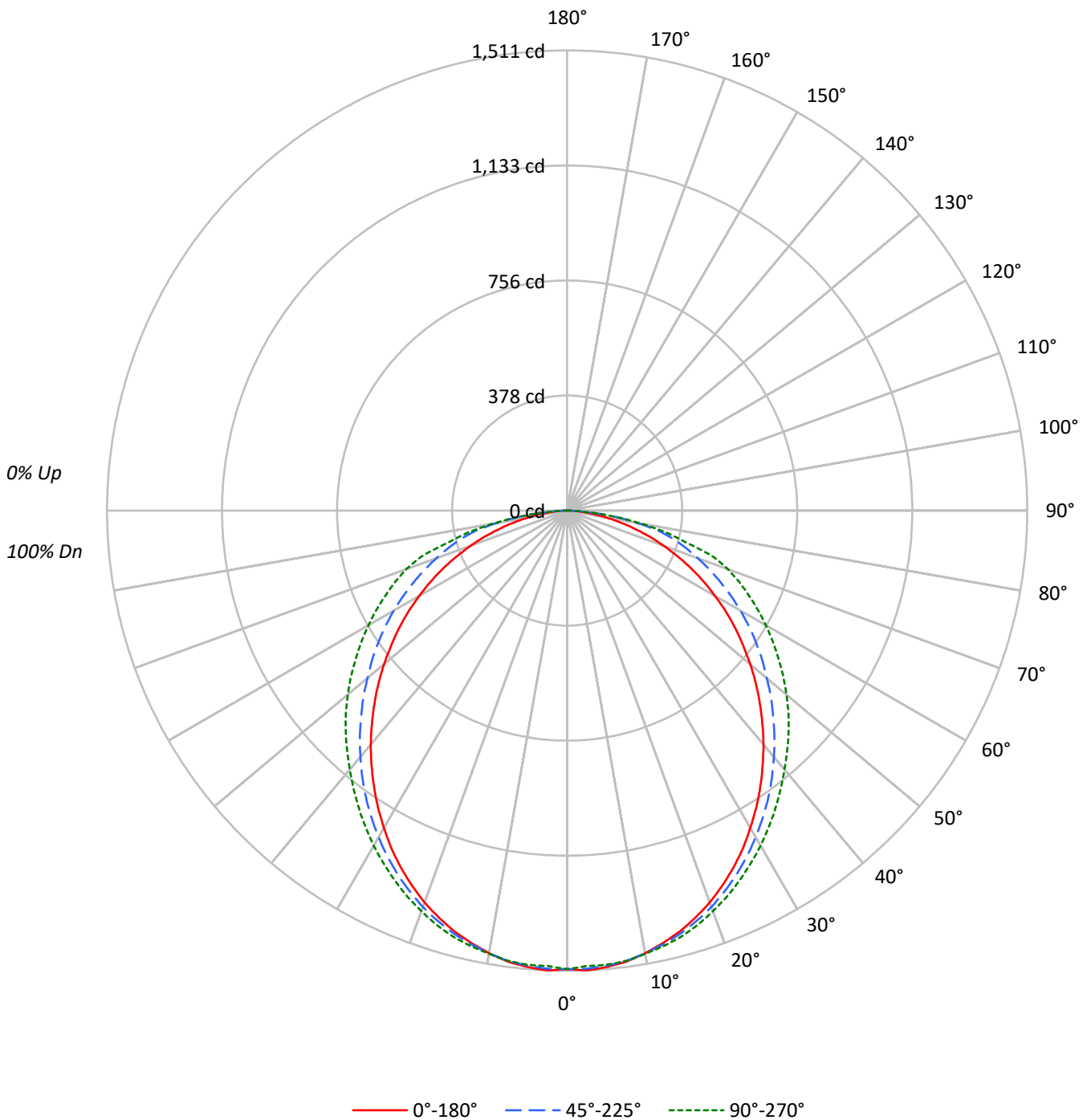
Input Watts (W): 35.69
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2026	2026	2026
5°	2031	2026	2022
10°	2017	2017	2019
15°	1993	2003	2017
20°	1960	1983	2004
25°	1919	1956	1989
30°	1869	1924	1974
35°	1817	1892	1959
40°	1762	1855	1950
45°	1702	1819	1956
50°	1642	1789	1968
55°	1582	1778	1988
60°	1510	1767	2028
65°	1431	1768	2095
70°	1323	1797	2207
75°	1184	1878	2100
80°	990	1798	1923
85°	749	1383	1315



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	142.3	3.3
10°-20°	404.9	9.4
20°-30°	605.3	14.1
30°-40°	718.1	16.7
40°-50°	739.1	17.2
50°-60°	678.1	15.8
60°-70°	548.2	12.8
70°-80°	355.8	8.3
80°-90°	98.1	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°	1152.5	26.9
0°-40°	1870.7	43.6
0°-60°	3287.8	76.6
0°-90°	4290.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4290.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1506	1506	1506	1506	1506	
5°	1504	1494	1500	1498	1497	143
15°	1431	1425	1438	1444	1448	403
25°	1293	1294	1318	1329	1340	595
35°	1106	1115	1152	1176	1193	692
45°	894	909	956	1002	1028	690
55°	674	695	758	820	848	602
65°	450	476	555	629	658	444
75°	228	270	361	404	404	242
85°	48	82	90	87	85	59
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1505.6	1505.6	1505.6	1505.6	1505.6
2.5°	1511.4	1499.7	1505.6	1504.1	1496.8
5°	1504.1	1493.8	1499.7	1498.2	1496.8
7.5°	1493.8	1483.5	1490.9	1489.4	1490.9
10°	1476.2	1467.4	1476.2	1477.7	1477.7
12.5°	1454.2	1446.8	1458.6	1461.5	1464.4
15°	1430.7	1424.8	1438.0	1443.9	1448.3
17.5°	1401.3	1396.9	1413.0	1420.4	1426.2
20°	1369.0	1367.5	1385.1	1392.5	1399.8
22.5°	1332.2	1332.2	1352.8	1361.6	1371.9
25°	1292.6	1294.1	1317.6	1329.3	1339.6
27.5°	1250.0	1251.5	1279.4	1294.1	1305.8
30°	1203.0	1208.9	1238.2	1257.3	1270.6
32.5°	1156.0	1163.3	1195.6	1217.7	1232.4
35°	1106.0	1114.9	1151.6	1176.5	1192.7
37.5°	1054.6	1064.9	1104.6	1132.5	1151.6
40°	1003.2	1015.0	1056.1	1088.4	1110.4
42.5°	948.9	962.1	1007.6	1045.8	1069.3
45°	894.5	909.2	956.2	1001.8	1028.2
47.5°	840.2	857.8	907.7	957.7	985.6
50°	784.4	802.0	854.9	912.2	940.1
52.5°	728.5	749.1	807.9	866.6	894.5
55°	674.2	694.8	757.9	819.6	847.5
57.5°	618.4	638.9	708.0	772.6	800.5
60°	561.1	584.6	656.6	722.7	753.5
62.5°	505.3	530.3	606.6	677.1	706.5
65°	449.5	475.9	555.2	628.7	658.0
67.5°	392.2	423.0	505.3	580.2	611.0
70°	336.4	370.1	456.8	531.7	561.1
72.5°	282.0	318.7	408.3	484.7	502.3
75°	227.7	270.3	361.3	403.9	403.9
77.5°	176.3	223.3	308.5	324.6	333.4
80°	127.8	179.2	232.1	251.2	248.2
82.5°	85.2	136.6	166.0	166.0	161.6
85°	48.5	82.3	89.6	86.7	85.2
87.5°	20.6	30.8	27.9	22.0	19.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)