

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: P388735

Luminaire Tested: **24CZ2-45VHE-SQR-UNV-L940-CD1-SWPD1-U**

Issue Date: 2/28/2020

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.

Test Information

Test Method: LM-79-08
Report Number: P388735
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2002-678-2)
Test Lab: INNOVATION CENTER (G2)
Issue Date: 2/28/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-45VHE-SQR-UNV-L940-CD1-SWPD1-U
Description: 2x4 CRUZE LED TROFFER WITH 4000K, 90 LEDS, AND SQUARE LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3693.7 lumens
Efficiency: N/A
Efficacy: 124.8 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.33 / 1.41
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

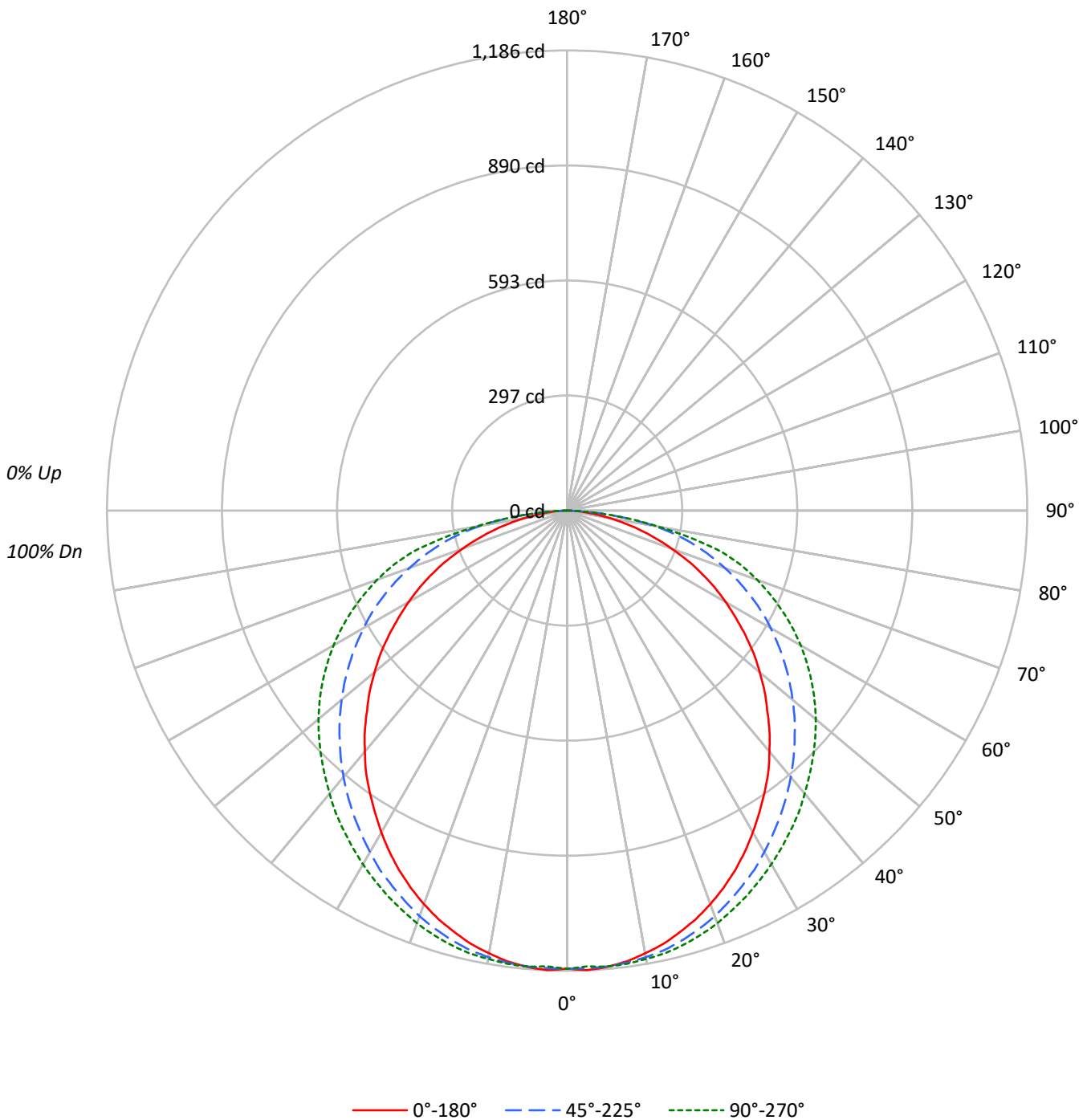
Input Watts (W): 29.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	98	94	105	100	96	92	96	93	89	92	89	87	89	86	84	82
2	98	89	81	75	95	87	80	74	83	78	73	80	75	71	77	73	69	67
3	89	77	69	62	86	76	68	61	73	66	60	70	64	59	67	62	58	56
4	81	68	59	52	78	67	58	52	64	57	51	62	55	50	60	54	49	47
5	74	61	51	44	72	60	51	44	57	50	44	55	49	43	54	48	43	41
6	68	55	45	39	66	54	45	38	52	44	38	50	43	38	48	42	37	35
7	63	49	40	34	62	49	40	34	47	39	34	45	39	33	44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30	42	35	30	40	34	30	28
9	55	41	33	27	54	41	33	27	39	32	27	38	32	27	37	31	27	25
10	52	38	30	25	50	37	30	24	36	29	24	36	29	24	35	29	24	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1589	1589	1589
5°	1595	1593	1593
10°	1583	1596	1603
15°	1567	1597	1614
20°	1546	1593	1621
25°	1519	1584	1626
30°	1488	1578	1635
35°	1456	1575	1651
40°	1425	1575	1673
45°	1388	1578	1706
50°	1356	1588	1751
55°	1316	1605	1805
60°	1270	1631	1871
65°	1216	1662	1949
70°	1127	1703	2049
75°	1021	1763	2143
80°	860	1767	1843
85°	659	1337	1337



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	112.1	3.0
10°-20°	322.5	8.7
20°-30°	489.8	13.3
30°-40°	595.7	16.1
40°-50°	634.3	17.2
50°-60°	604.1	16.4
60°-70°	505.2	13.7
70°-80°	336.8	9.1
80°-90°	93.2	2.5
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°	924.3	25.0
0°-40°	1520.1	41.2
0°-60°	2758.5	74.7
0°-90°	3693.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3693.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1181	1181	1181	1181	1181	
5°	1181	1173	1180	1180	1180	112
15°	1125	1127	1146	1155	1159	317
25°	1023	1037	1067	1086	1095	471
35°	887	912	959	990	1005	555
45°	729	768	829	876	896	564
55°	561	610	684	744	770	502
65°	382	438	522	587	612	377
75°	196	259	339	396	412	208
85°	43	79	87	85	87	52
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1180.7	1180.7	1180.7	1180.7	1180.7
2.5°	1185.6	1177.0	1180.7	1180.7	1175.8
5°	1180.7	1173.4	1179.5	1179.5	1179.5
7.5°	1172.1	1166.0	1175.8	1178.2	1178.2
10°	1158.7	1156.3	1168.5	1172.1	1173.4
12.5°	1144.1	1142.9	1160.0	1164.8	1168.5
15°	1124.6	1127.0	1146.5	1155.1	1158.7
17.5°	1103.8	1108.7	1130.7	1142.9	1146.5
20°	1079.4	1086.8	1112.4	1124.6	1131.9
22.5°	1052.6	1063.6	1090.4	1105.1	1113.6
25°	1023.3	1036.8	1067.3	1085.5	1095.3
27.5°	991.6	1008.7	1044.1	1064.8	1074.6
30°	957.5	977.0	1016.0	1040.4	1052.6
32.5°	922.1	945.3	988.0	1014.8	1029.4
35°	886.7	912.3	958.7	990.4	1005.0
37.5°	851.4	877.0	928.2	962.4	980.7
40°	811.1	841.6	896.5	934.3	952.6
42.5°	772.1	805.0	863.6	905.0	924.5
45°	729.4	768.4	829.4	875.8	896.5
47.5°	690.4	729.4	795.3	844.0	867.2
50°	647.7	689.1	758.7	812.3	836.7
52.5°	606.2	648.9	722.1	779.4	803.8
55°	561.1	609.9	684.3	744.0	769.6
57.5°	515.9	568.4	645.2	707.4	733.1
60°	472.0	525.7	606.2	668.4	695.2
62.5°	428.1	481.8	565.9	629.4	655.0
65°	381.8	437.9	522.0	586.7	612.3
67.5°	335.4	394.0	478.1	542.8	567.2
70°	286.6	348.8	433.0	496.4	520.8
72.5°	241.5	303.7	386.7	448.9	472.0
75°	196.4	258.6	339.1	396.4	412.3
77.5°	152.5	214.7	286.6	324.4	328.1
80°	111.0	169.5	228.1	239.1	237.8
82.5°	74.4	126.9	157.3	158.6	162.2
85°	42.7	79.3	86.6	85.4	86.6
87.5°	17.1	28.1	24.4	18.3	18.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)