

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: P388926

Luminaire Tested: **24CZ2-60HE-SQR-UNV-L940-CD1-SDWPD1-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: P388926
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: 24CZ2-60HE-SQR-UNV-L940-CD1-SDWPD1-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: 4811.4 lumens
Efficiency: N/A
Efficacy: 109.1 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

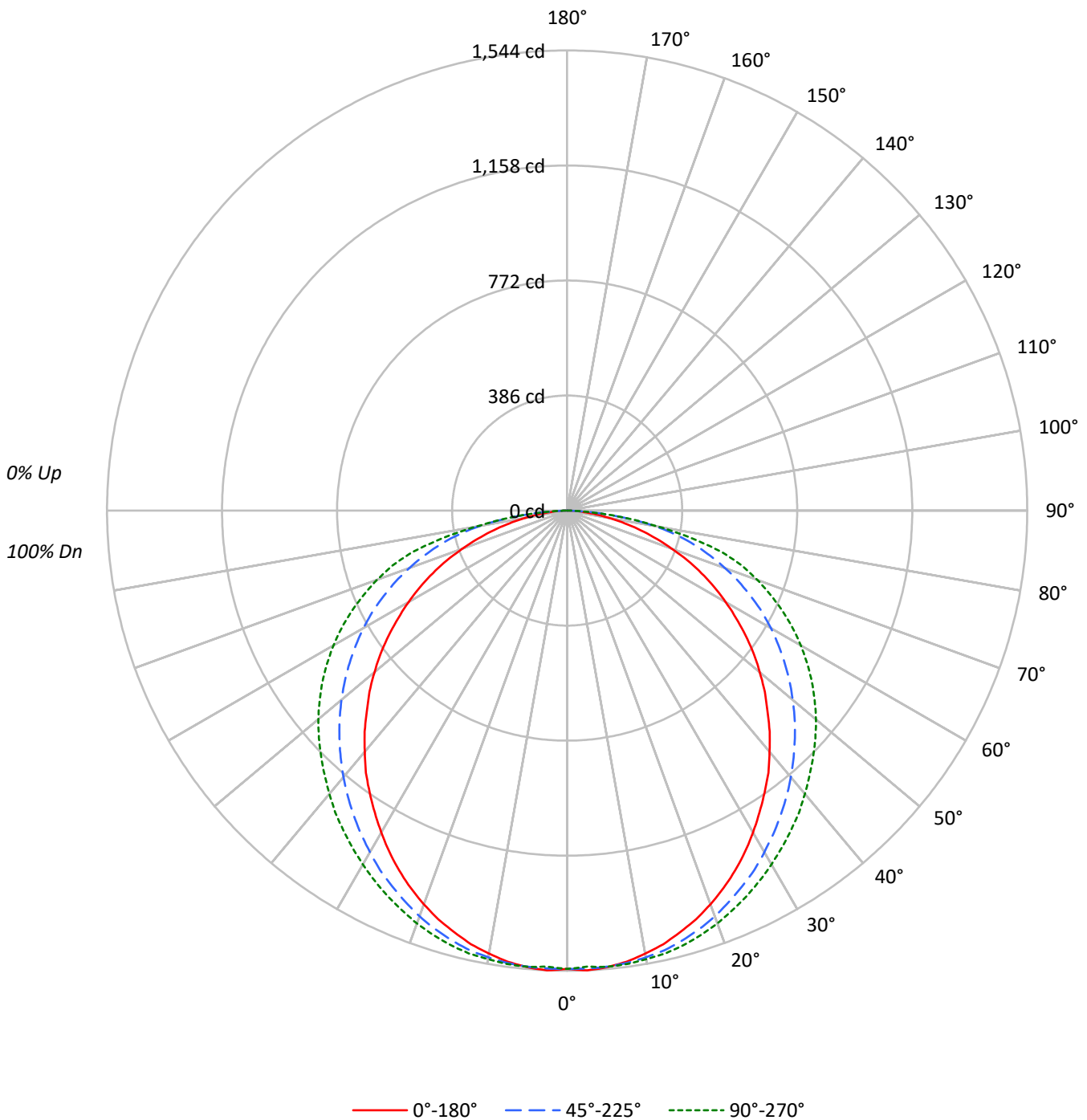
Input Watts (W): 44.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2069	2069	2069
5°	2077	2075	2075
10°	2062	2080	2088
15°	2041	2080	2103
20°	2013	2075	2111
25°	1979	2064	2118
30°	1938	2056	2130
35°	1897	2051	2150
40°	1856	2051	2180
45°	1808	2056	2222
50°	1766	2069	2281
55°	1714	2091	2352
60°	1655	2125	2437
65°	1583	2165	2539
70°	1469	2219	2669
75°	1330	2296	2792
80°	1120	2302	2400
85°	858	1741	1741



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	146.0	3.0
10°-20°	420.0	8.7
20°-30°	638.0	13.3
30°-40°	776.0	16.1
40°-50°	826.2	17.2
50°-60°	786.9	16.4
60°-70°	658.1	13.7
70°-80°	438.8	9.1
80°-90°	121.4	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°	1204.0	25.0
0°-40°	1980.0	41.2
0°-60°	3593.1	74.7
0°-90°	4811.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4811.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1538	1538	1538	1538	1538	
5°	1538	1528	1536	1536	1536	146
15°	1465	1468	1494	1505	1509	413
25°	1333	1350	1390	1414	1427	614
35°	1155	1188	1249	1290	1309	723
45°	950	1001	1080	1141	1168	734
55°	731	794	891	969	1002	653
65°	497	570	680	764	798	491
75°	256	337	442	516	537	271
85°	56	103	113	111	113	67
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1538.0	1538.0	1538.0	1538.0	1538.0
2.5°	1544.3	1533.2	1538.0	1538.0	1531.6
5°	1538.0	1528.4	1536.4	1536.4	1536.4
7.5°	1526.8	1518.9	1531.6	1534.8	1534.8
10°	1509.4	1506.2	1522.1	1526.8	1528.4
12.5°	1490.3	1488.7	1510.9	1517.3	1522.1
15°	1464.9	1468.1	1493.5	1504.6	1509.4
17.5°	1437.9	1444.2	1472.8	1488.7	1493.5
20°	1406.1	1415.6	1449.0	1464.9	1474.4
22.5°	1371.1	1385.4	1420.4	1439.5	1450.6
25°	1333.0	1350.5	1390.2	1414.0	1426.7
27.5°	1291.7	1313.9	1360.0	1387.0	1399.7
30°	1247.2	1272.6	1323.5	1355.2	1371.1
32.5°	1201.1	1231.3	1286.9	1321.9	1340.9
35°	1155.1	1188.4	1248.8	1290.1	1309.2
37.5°	1109.0	1142.3	1209.1	1253.6	1277.4
40°	1056.6	1096.3	1167.8	1217.0	1240.9
42.5°	1005.7	1048.6	1124.9	1178.9	1204.3
45°	950.1	1000.9	1080.4	1140.8	1167.8
47.5°	899.3	950.1	1035.9	1099.4	1129.6
50°	843.7	897.7	988.2	1058.1	1089.9
52.5°	789.6	845.2	940.6	1015.2	1047.0
55°	730.8	794.4	891.3	969.2	1002.5
57.5°	672.1	740.4	840.5	921.5	954.9
60°	614.9	684.8	789.6	870.7	905.6
62.5°	557.7	627.6	737.2	819.8	853.2
65°	497.3	570.4	680.0	764.2	797.6
67.5°	436.9	513.2	622.8	707.0	738.8
70°	373.4	454.4	564.0	646.6	678.4
72.5°	314.6	395.6	503.6	584.7	614.9
75°	255.8	336.8	441.7	516.4	537.0
77.5°	198.6	279.6	373.4	422.6	427.4
80°	144.6	220.8	297.1	311.4	309.8
82.5°	96.9	165.2	205.0	206.5	211.3
85°	55.6	103.3	112.8	111.2	112.8
87.5°	22.2	36.5	31.8	23.8	23.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)