

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: P388930

Luminaire Tested: **24CZ2-60HE-SQR-UNV-L950-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: P388930
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-L950-CD1-SWPD1-U
Description: 2x4 CRUZE LED TROFFER WITH 5000K, 90 LEDS, AND SQUARE LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5169.3 lumens
Efficiency: N/A
Efficacy: 117.2 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

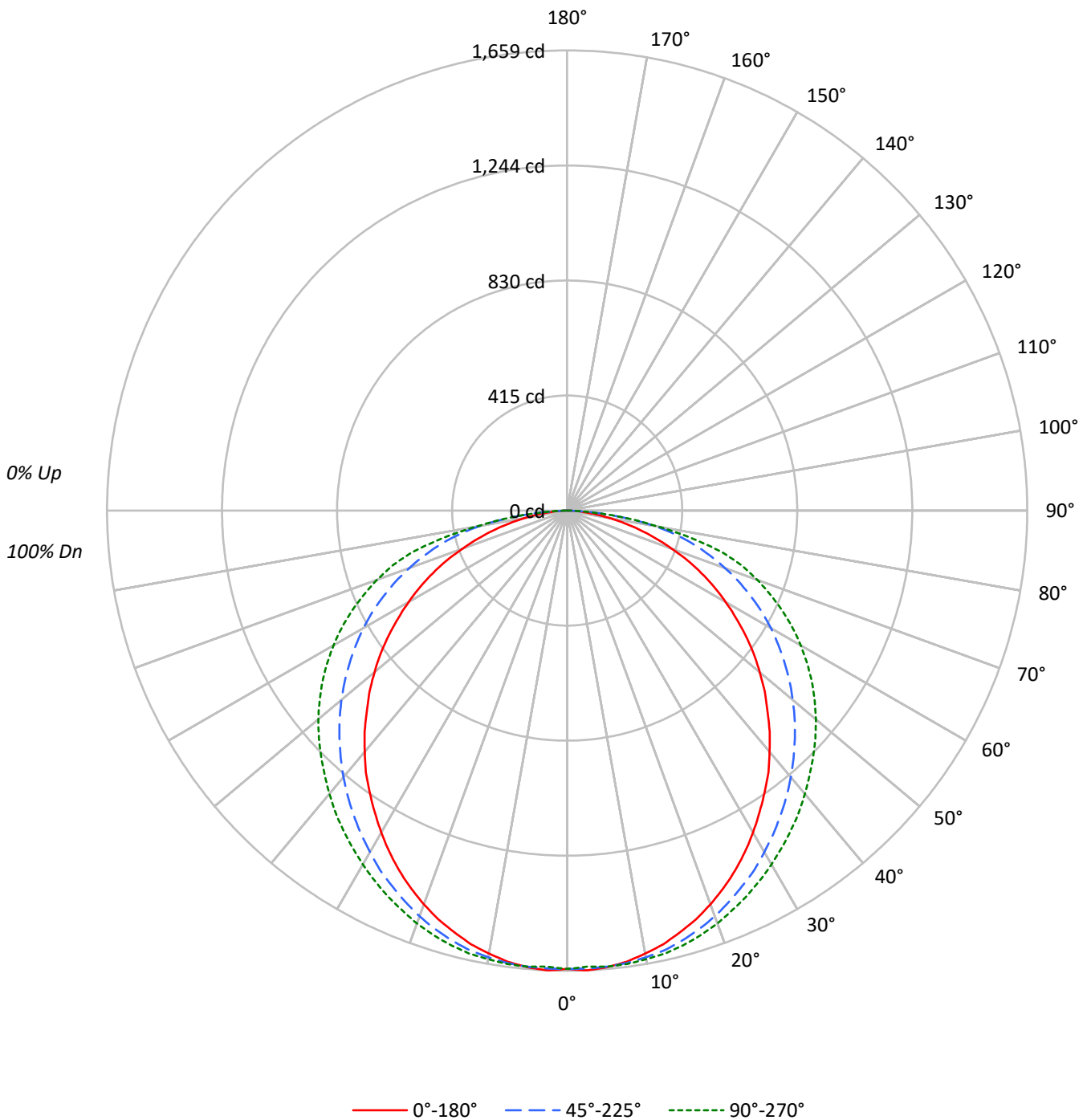
Input Watts (W): 44.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2223	2223	2223
5°	2232	2229	2229
10°	2216	2234	2244
15°	2192	2235	2259
20°	2163	2229	2268
25°	2126	2217	2276
30°	2082	2209	2289
35°	2038	2204	2310
40°	1994	2204	2342
45°	1942	2209	2387
50°	1897	2222	2451
55°	1842	2246	2527
60°	1778	2283	2618
65°	1701	2326	2728
70°	1578	2384	2867
75°	1429	2467	3000
80°	1203	2473	2579
85°	922	1871	1871



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	156.8	3.0
10°-20°	451.3	8.7
20°-30°	685.4	13.3
30°-40°	833.7	16.1
40°-50°	887.7	17.2
50°-60°	845.5	16.4
60°-70°	707.0	13.7
70°-80°	471.4	9.1
80°-90°	130.4	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°	1293.6	25.0
0°-40°	2127.3	41.2
0°-60°	3860.4	74.7
0°-90°	5169.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5169.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1652	1652	1652	1652	1652	
5°	1652	1642	1651	1651	1651	157
15°	1574	1577	1605	1616	1622	444
25°	1432	1451	1494	1519	1533	659
35°	1241	1277	1342	1386	1407	777
45°	1021	1075	1161	1226	1255	789
55°	785	854	958	1041	1077	702
65°	534	613	731	821	857	528
75°	275	362	474	555	577	291
85°	60	111	121	120	121	72
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1652.4	1652.4	1652.4	1652.4	1652.4
2.5°	1659.2	1647.2	1652.4	1652.4	1645.5
5°	1652.4	1642.1	1650.7	1650.7	1650.7
7.5°	1640.4	1631.9	1645.5	1648.9	1648.9
10°	1621.6	1618.2	1635.3	1640.4	1642.1
12.5°	1601.2	1599.4	1623.3	1630.2	1635.3
15°	1573.8	1577.3	1604.6	1616.5	1621.6
17.5°	1544.8	1551.6	1582.4	1599.4	1604.6
20°	1510.7	1520.9	1556.8	1573.8	1584.1
22.5°	1473.1	1488.5	1526.0	1546.5	1558.5
25°	1432.2	1450.9	1493.6	1519.2	1532.9
27.5°	1387.8	1411.7	1461.2	1490.2	1503.9
30°	1340.0	1367.3	1421.9	1456.1	1473.1
32.5°	1290.5	1322.9	1382.7	1420.2	1440.7
35°	1241.0	1276.8	1341.7	1386.1	1406.6
37.5°	1191.5	1227.3	1299.0	1346.8	1372.4
40°	1135.1	1177.8	1254.6	1307.5	1333.2
42.5°	1080.5	1126.6	1208.5	1266.6	1293.9
45°	1020.8	1075.4	1160.7	1225.6	1254.6
47.5°	966.2	1020.8	1113.0	1181.2	1213.7
50°	906.4	964.4	1061.7	1136.9	1171.0
52.5°	848.4	908.1	1010.5	1090.8	1124.9
55°	785.2	853.5	957.6	1041.3	1077.1
57.5°	722.1	795.5	903.0	990.1	1025.9
60°	660.6	735.7	848.4	935.4	973.0
62.5°	599.2	674.3	792.0	880.8	916.7
65°	534.3	612.8	730.6	821.1	856.9
67.5°	469.4	551.4	669.1	759.6	793.7
70°	401.1	488.2	606.0	694.7	728.9
72.5°	338.0	425.0	541.1	628.2	660.6
75°	274.8	361.9	474.5	554.8	577.0
77.5°	213.4	300.4	401.1	454.1	459.2
80°	155.3	237.3	319.2	334.6	332.9
82.5°	104.1	177.5	220.2	221.9	227.0
85°	59.7	111.0	121.2	119.5	121.2
87.5°	23.9	39.3	34.1	25.6	25.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)