

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: P388921

Luminaire Tested: **24CZ2-60HE-SQR-UNV-L930-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: P388921
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-L930-CD1-SWPD1-U
Description: 2x4 CRUZE LED TROFFER WITH 3000K, 90 LEDS, AND SQUARE LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4703.9 lumens
Efficiency: N/A
Efficacy: 106.7 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

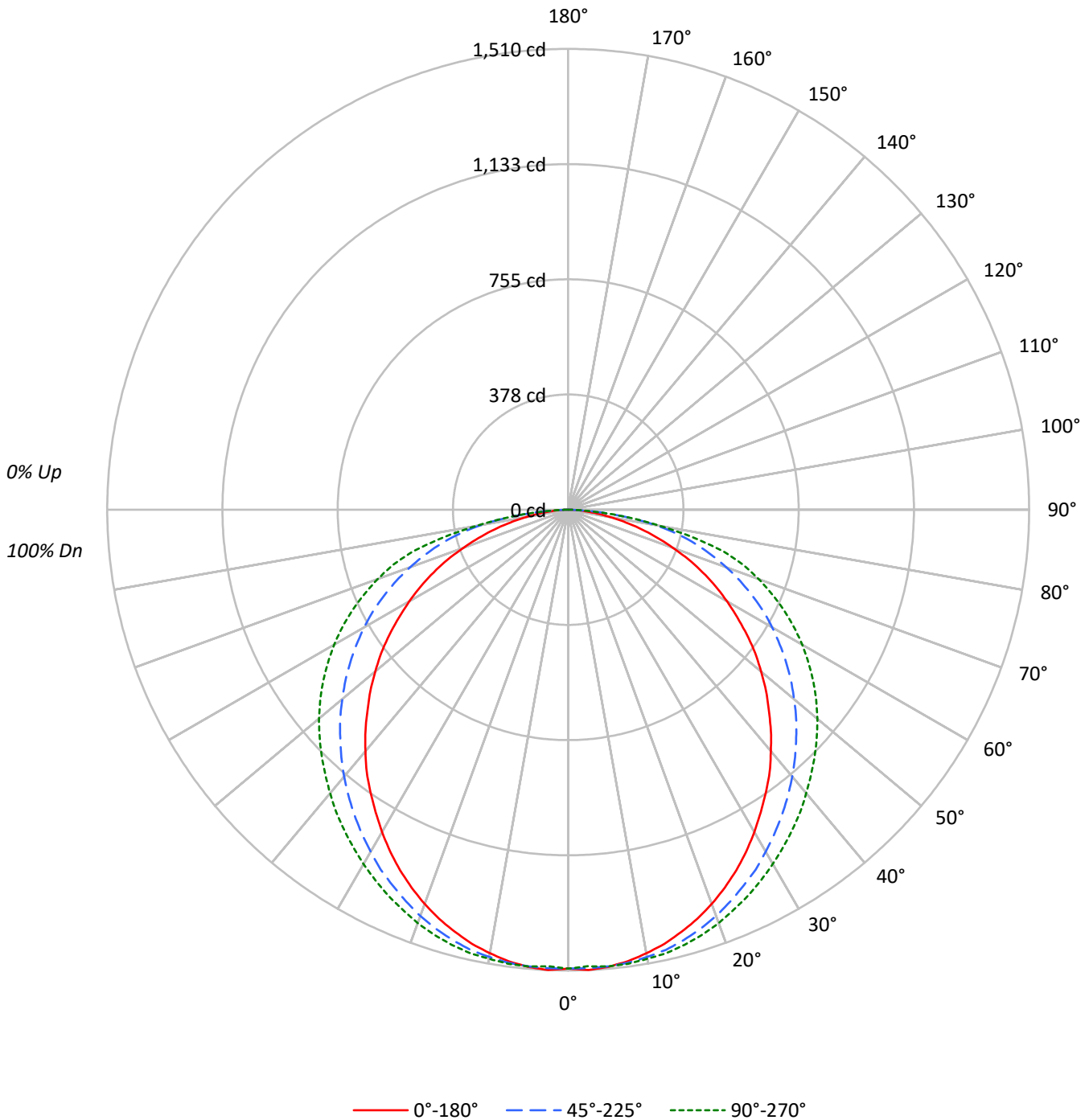
Input Watts (W): 44.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2023	2023	2023
5°	2031	2029	2029
10°	2016	2033	2042
15°	1995	2034	2055
20°	1968	2028	2064
25°	1935	2018	2071
30°	1894	2010	2083
35°	1855	2005	2102
40°	1814	2005	2131
45°	1768	2010	2172
50°	1726	2022	2231
55°	1676	2044	2299
60°	1618	2077	2383
65°	1548	2117	2483
70°	1436	2169	2609
75°	1300	2245	2729
80°	1096	2251	2347
85°	840	1703	1703



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	142.7	3.0
10°-20°	410.6	8.7
20°-30°	623.7	13.3
30°-40°	758.7	16.1
40°-50°	807.8	17.2
50°-60°	769.3	16.4
60°-70°	643.4	13.7
70°-80°	429.0	9.1
80°-90°	118.7	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°	1177.1	25.0
0°-40°	1935.8	41.2
0°-60°	3512.9	74.7
0°-90°	4703.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4703.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1504	1504	1504	1504	1504	
5°	1504	1494	1502	1502	1502	143
15°	1432	1435	1460	1471	1476	404
25°	1303	1320	1359	1382	1395	600
35°	1129	1162	1221	1261	1280	707
45°	929	979	1056	1115	1142	718
55°	714	777	871	948	980	639
65°	486	558	665	747	780	480
75°	250	329	432	505	525	265
85°	54	101	110	109	110	66
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1503.6	1503.6	1503.6	1503.6	1503.6
2.5°	1509.8	1498.9	1503.6	1503.6	1497.4
5°	1503.6	1494.3	1502.0	1502.0	1502.0
7.5°	1492.7	1485.0	1497.4	1500.5	1500.5
10°	1475.6	1472.5	1488.1	1492.7	1494.3
12.5°	1457.0	1455.4	1477.2	1483.4	1488.1
15°	1432.1	1435.3	1460.1	1471.0	1475.6
17.5°	1405.7	1412.0	1439.9	1455.4	1460.1
20°	1374.7	1384.0	1416.6	1432.1	1441.5
22.5°	1340.5	1354.5	1388.7	1407.3	1418.2
25°	1303.2	1320.3	1359.1	1382.4	1394.9
27.5°	1262.8	1284.6	1329.6	1356.0	1368.5
30°	1219.3	1244.2	1293.9	1325.0	1340.5
32.5°	1174.3	1203.8	1258.2	1292.3	1311.0
35°	1129.2	1161.9	1220.9	1261.3	1279.9
37.5°	1084.2	1116.8	1182.1	1225.6	1248.9
40°	1032.9	1071.8	1141.7	1189.8	1213.1
42.5°	983.2	1025.2	1099.7	1152.5	1177.4
45°	928.9	978.6	1056.2	1115.3	1141.7
47.5°	879.2	928.9	1012.8	1074.9	1104.4
50°	824.8	877.6	966.2	1034.5	1065.6
52.5°	772.0	826.4	919.6	992.6	1023.6
55°	714.5	776.7	871.4	947.5	980.1
57.5°	657.0	723.8	821.7	900.9	933.5
60°	601.1	669.5	772.0	851.2	885.4
62.5°	545.2	613.6	720.7	801.5	834.1
65°	486.2	557.6	664.8	747.1	779.8
67.5°	427.2	501.7	608.9	691.2	722.3
70°	365.0	444.2	551.4	632.2	663.3
72.5°	307.6	386.8	492.4	571.6	601.1
75°	250.1	329.3	431.8	504.8	525.0
77.5°	194.2	273.4	365.0	413.2	417.8
80°	141.4	215.9	290.5	304.4	302.9
82.5°	94.8	161.5	200.4	201.9	206.6
85°	54.4	101.0	110.3	108.7	110.3
87.5°	21.7	35.7	31.1	23.3	23.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)