

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: P388993

Luminaire Tested: **24CZ2-65HE-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: P388993
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: 24CZ2-65HE-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: 5157.0 lumens
Efficiency: N/A
Efficacy: 105.5 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

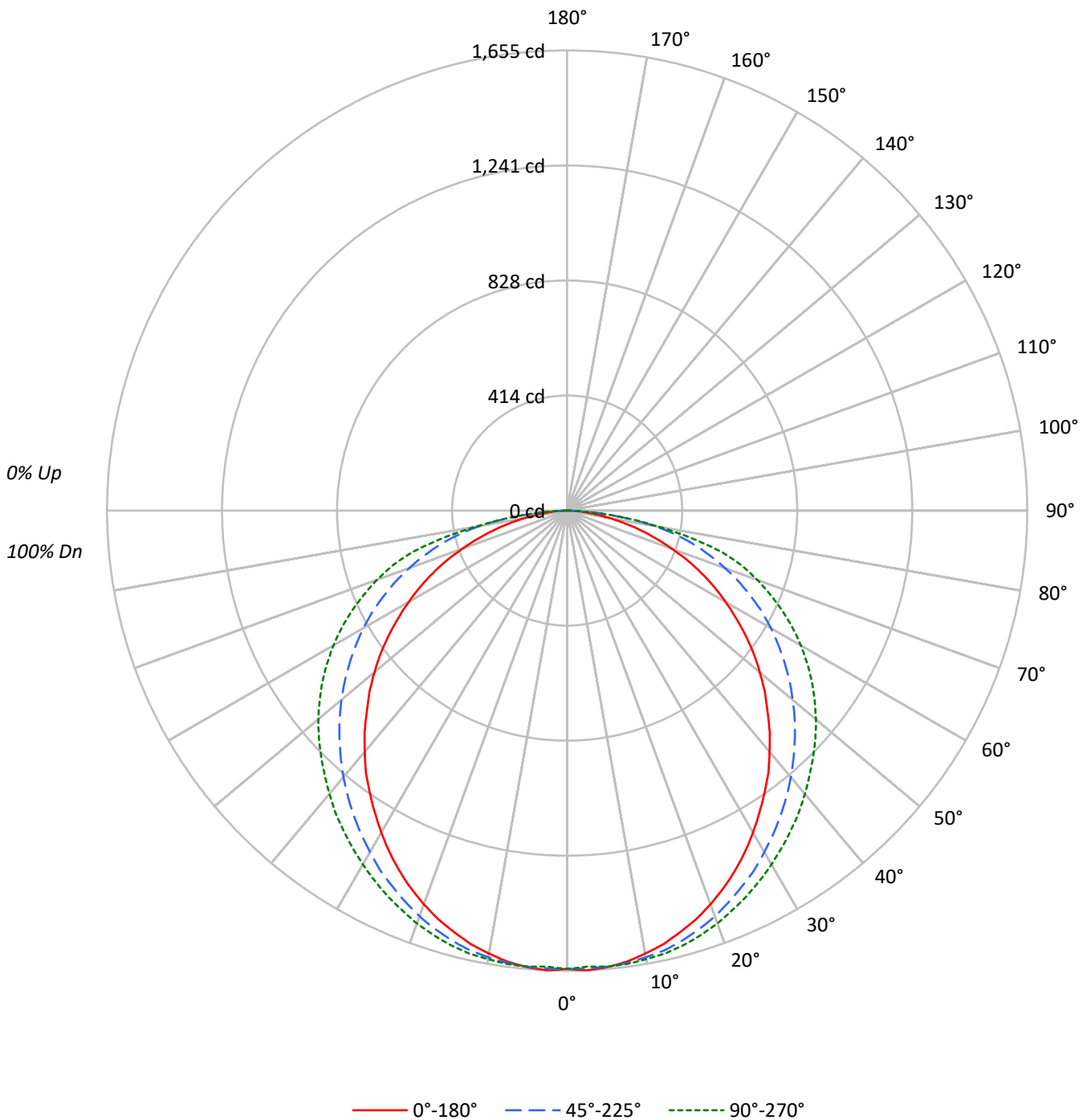
Input Watts (W): 48.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2218	2218	2218
5°	2226	2224	2224
10°	2210	2229	2238
15°	2187	2230	2254
20°	2158	2224	2263
25°	2121	2212	2270
30°	2077	2204	2283
35°	2033	2199	2305
40°	1989	2198	2336
45°	1938	2203	2382
50°	1893	2217	2445
55°	1837	2241	2521
60°	1773	2278	2612
65°	1697	2321	2722
70°	1574	2378	2860
75°	1425	2461	2992
80°	1201	2467	2573
85°	920	1866	1866



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	156.5	3.0
10°-20°	450.2	8.7
20°-30°	683.8	13.3
30°-40°	831.8	16.1
40°-50°	885.5	17.2
50°-60°	843.5	16.4
60°-70°	705.4	13.7
70°-80°	470.3	9.1
80°-90°	130.1	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°	1290.5	25.0
0°-40°	2122.2	41.2
0°-60°	3851.2	74.7
0°-90°	5157.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5157.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1648	1648	1648	1648	1648	
5°	1648	1638	1647	1647	1647	156
15°	1570	1574	1601	1613	1618	443
25°	1429	1448	1490	1516	1529	658
35°	1238	1274	1338	1383	1403	775
45°	1018	1073	1158	1223	1252	787
55°	783	852	955	1039	1074	700
65°	533	611	729	819	855	527
75°	274	361	473	553	576	290
85°	60	111	121	119	121	72
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1648.4	1648.4	1648.4	1648.4	1648.4
2.5°	1655.2	1643.3	1648.4	1648.4	1641.6
5°	1648.4	1638.2	1646.7	1646.7	1646.7
7.5°	1636.5	1628.0	1641.6	1645.0	1645.0
10°	1617.8	1614.4	1631.4	1636.5	1638.2
12.5°	1597.3	1595.6	1619.5	1626.3	1631.4
15°	1570.1	1573.5	1600.7	1612.7	1617.8
17.5°	1541.1	1548.0	1578.6	1595.6	1600.7
20°	1507.1	1517.3	1553.1	1570.1	1580.3
22.5°	1469.6	1484.9	1522.4	1542.8	1554.8
25°	1428.8	1447.5	1490.1	1515.6	1529.2
27.5°	1384.5	1408.3	1457.7	1486.7	1500.3
30°	1336.8	1364.0	1418.5	1452.6	1469.6
32.5°	1287.4	1319.8	1379.4	1416.8	1437.3
35°	1238.0	1273.8	1338.5	1382.8	1403.2
37.5°	1188.6	1224.4	1295.9	1343.6	1369.1
40°	1132.4	1175.0	1251.6	1304.4	1330.0
42.5°	1077.9	1123.9	1205.7	1263.6	1290.8
45°	1018.3	1072.8	1158.0	1222.7	1251.6
47.5°	963.9	1018.3	1110.3	1178.4	1210.8
50°	904.3	962.2	1059.2	1134.1	1168.2
52.5°	846.4	906.0	1008.1	1088.2	1122.2
55°	783.3	851.5	955.3	1038.8	1074.5
57.5°	720.3	793.6	900.8	987.7	1023.5
60°	659.0	734.0	846.4	933.2	970.7
62.5°	597.7	672.7	790.2	878.7	914.5
65°	533.0	611.3	728.9	819.1	854.9
67.5°	468.3	550.0	667.5	757.8	791.9
70°	400.2	487.0	604.5	693.1	727.1
72.5°	337.2	424.0	539.8	626.7	659.0
75°	274.2	361.0	473.4	553.4	575.6
77.5°	212.9	299.7	400.2	453.0	458.1
80°	155.0	236.7	318.4	333.8	332.1
82.5°	103.9	177.1	219.7	221.4	226.5
85°	59.6	110.7	120.9	119.2	120.9
87.5°	23.8	39.2	34.1	25.5	25.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)