

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: P388992

Luminaire Tested: **24CZ2-65HE-SQR-UNV-L930-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: P388992
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-SDWPD1-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: 5094.8 lumens
Efficiency: N/A
Efficacy: 104.2 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

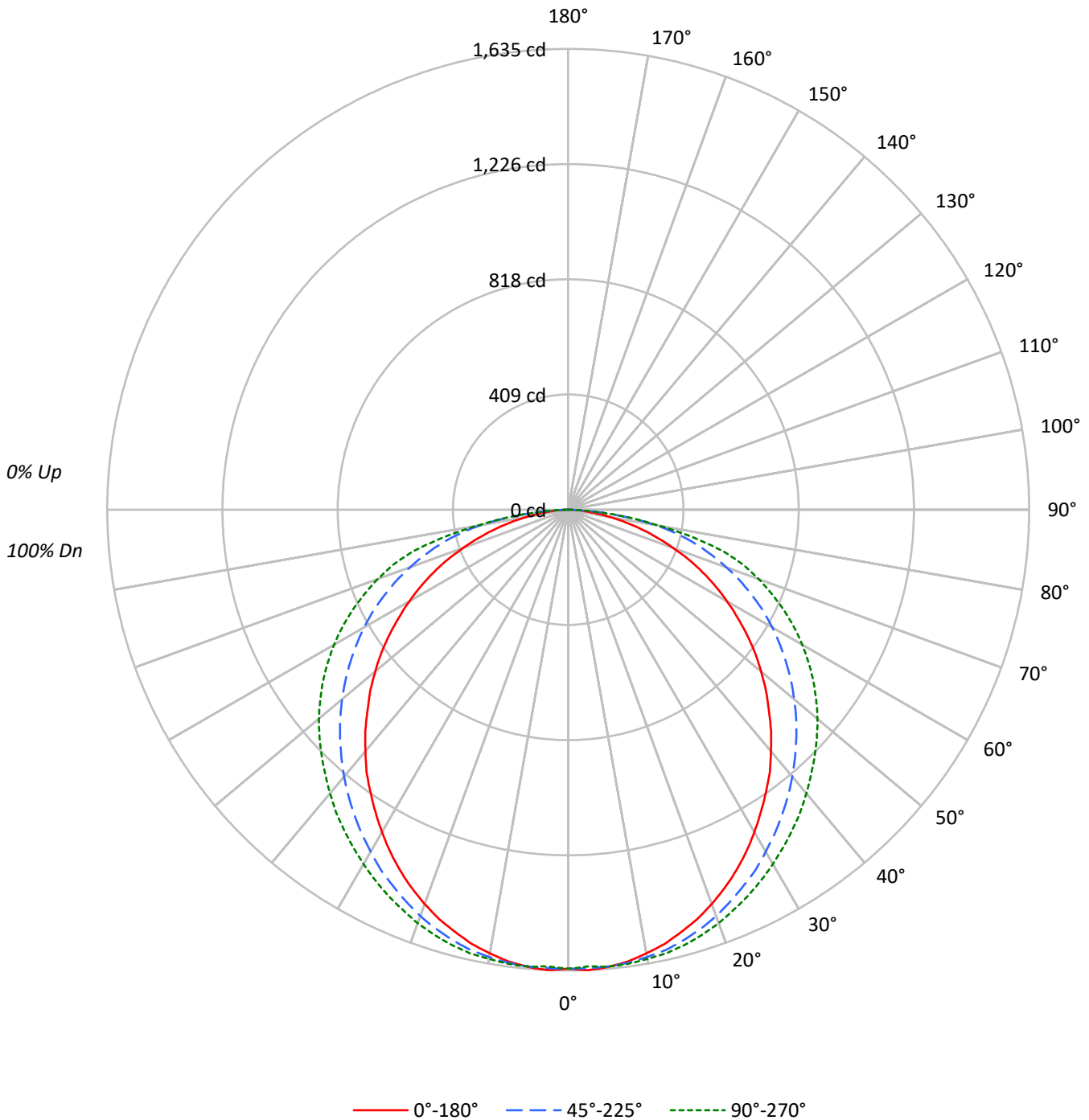
Input Watts (W): 48.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2191	2191	2191
5°	2199	2197	2197
10°	2184	2202	2211
15°	2161	2203	2226
20°	2132	2197	2236
25°	2095	2185	2243
30°	2052	2177	2256
35°	2009	2172	2277
40°	1965	2172	2308
45°	1914	2177	2353
50°	1870	2190	2416
55°	1815	2214	2490
60°	1752	2250	2581
65°	1677	2293	2689
70°	1555	2349	2826
75°	1408	2431	2956
80°	1186	2438	2542
85°	909	1843	1843



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	154.6	3.0
10°-20°	444.8	8.7
20°-30°	675.6	13.3
30°-40°	821.7	16.1
40°-50°	874.9	17.2
50°-60°	833.3	16.4
60°-70°	696.9	13.7
70°-80°	464.6	9.1
80°-90°	128.6	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°	1274.9	25.0
0°-40°	2096.6	41.2
0°-60°	3804.8	74.7
0°-90°	5094.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5094.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1628	1628	1628	1628	1628	
5°	1628	1618	1627	1627	1627	154
15°	1551	1554	1581	1593	1598	437
25°	1412	1430	1472	1497	1511	650
35°	1223	1258	1322	1366	1386	765
45°	1006	1060	1144	1208	1237	778
55°	774	841	944	1026	1062	692
65°	527	604	720	809	845	520
75°	271	357	468	547	569	287
85°	59	109	119	118	119	71
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1628.5	1628.5	1628.5	1628.5	1628.5
2.5°	1635.3	1623.5	1628.5	1628.5	1621.8
5°	1628.5	1618.5	1626.9	1626.9	1626.9
7.5°	1616.8	1608.4	1621.8	1625.2	1625.2
10°	1598.3	1594.9	1611.7	1616.8	1618.5
12.5°	1578.1	1576.4	1599.9	1606.7	1611.7
15°	1551.2	1554.5	1581.4	1593.2	1598.3
17.5°	1522.6	1529.3	1559.6	1576.4	1581.4
20°	1488.9	1499.0	1534.3	1551.2	1561.3
22.5°	1451.9	1467.0	1504.0	1524.2	1536.0
25°	1411.5	1430.0	1472.1	1497.3	1510.8
27.5°	1367.8	1391.3	1440.1	1468.7	1482.2
30°	1320.7	1347.6	1401.4	1435.1	1451.9
32.5°	1271.9	1303.8	1362.7	1399.7	1419.9
35°	1223.1	1258.4	1322.4	1366.1	1386.3
37.5°	1174.3	1209.6	1280.3	1327.4	1352.6
40°	1118.8	1160.8	1236.6	1288.7	1313.9
42.5°	1064.9	1110.4	1191.1	1248.3	1275.2
45°	1006.1	1059.9	1144.0	1208.0	1236.6
47.5°	952.2	1006.1	1096.9	1164.2	1196.2
50°	893.3	950.5	1046.4	1120.5	1154.1
52.5°	836.1	895.0	996.0	1075.0	1108.7
55°	773.9	841.2	943.8	1026.3	1061.6
57.5°	711.6	784.0	890.0	975.8	1011.1
60°	651.1	725.1	836.1	921.9	959.0
62.5°	590.5	664.5	780.6	868.1	903.4
65°	526.6	604.0	720.1	809.2	844.6
67.5°	462.7	543.4	659.5	748.7	782.3
70°	395.4	481.2	597.2	684.7	718.4
72.5°	333.1	418.9	533.3	619.1	651.1
75°	270.9	356.7	467.7	546.8	568.6
77.5°	210.3	296.1	395.4	447.5	452.6
80°	153.1	233.9	314.6	329.7	328.1
82.5°	102.6	175.0	217.0	218.7	223.8
85°	58.9	109.4	119.4	117.8	119.4
87.5°	23.6	38.7	33.6	25.2	25.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)