

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: P389022

Luminaire Tested: **24CZ2-65VHE-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: P389022
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: 24CZ2-65VHE-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: 5254.9 lumens
Efficiency: N/A
Efficacy: 124.5 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

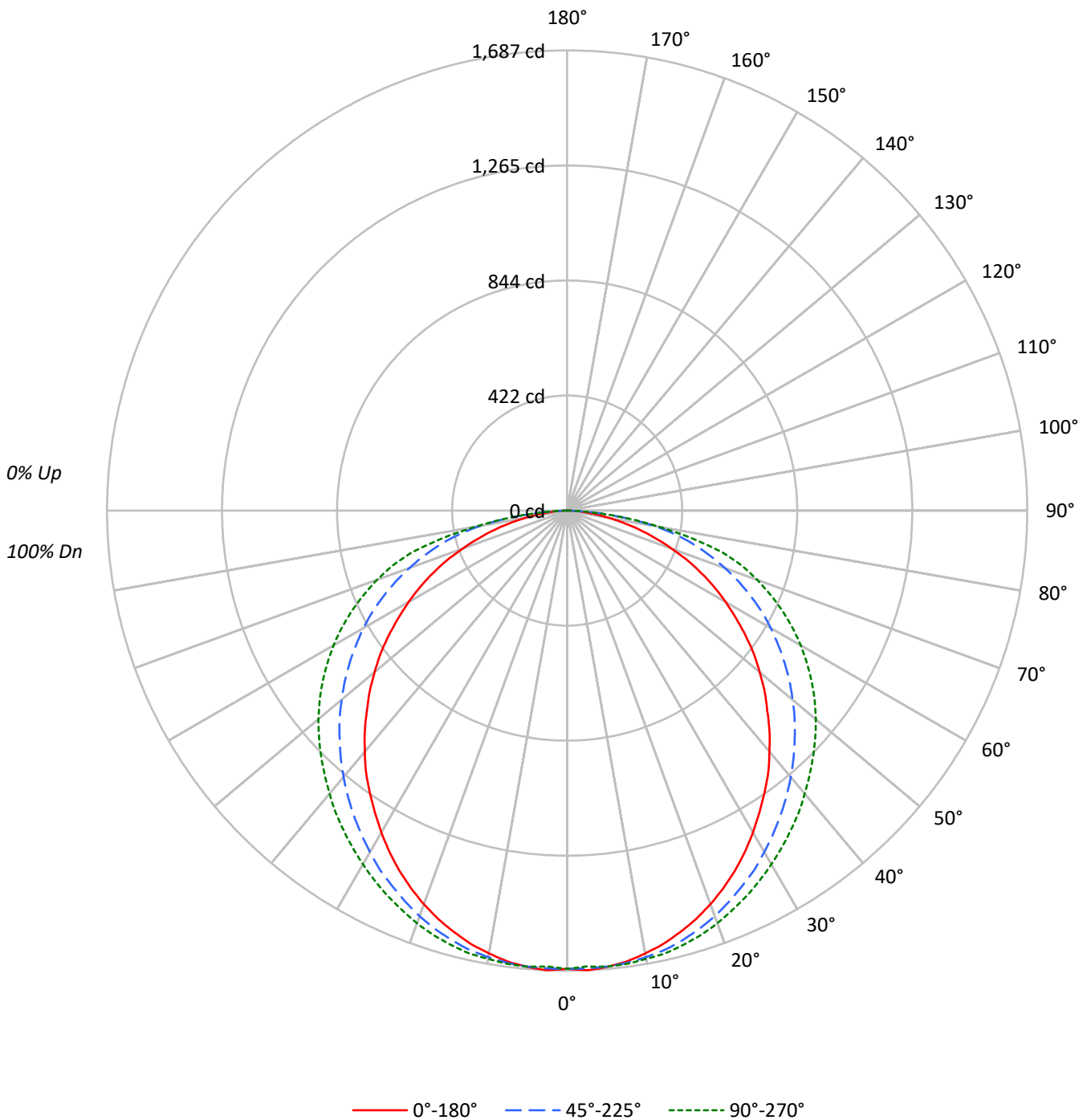
Input Watts (W): 42.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2260	2260	2260
5°	2269	2266	2266
10°	2252	2271	2281
15°	2229	2272	2296
20°	2199	2266	2306
25°	2161	2254	2313
30°	2116	2246	2327
35°	2072	2240	2349
40°	2027	2240	2380
45°	1975	2245	2427
50°	1929	2259	2492
55°	1872	2284	2568
60°	1807	2321	2662
65°	1729	2365	2773
70°	1604	2423	2915
75°	1452	2508	3049
80°	1223	2514	2622
85°	937	1902	1902



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	159.4	3.0
10°-20°	458.7	8.7
20°-30°	696.8	13.3
30°-40°	847.5	16.1
40°-50°	902.4	17.2
50°-60°	859.5	16.4
60°-70°	718.8	13.7
70°-80°	479.2	9.1
80°-90°	132.6	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°	1315.0	25.0
0°-40°	2162.5	41.2
0°-60°	3924.3	74.7
0°-90°	5254.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5254.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1680	1680	1680	1680	1680	
5°	1680	1669	1678	1678	1678	159
15°	1600	1603	1631	1643	1648	451
25°	1456	1475	1518	1544	1558	670
35°	1262	1298	1364	1409	1430	789
45°	1038	1093	1180	1246	1275	802
55°	798	868	974	1058	1095	714
65°	543	623	743	835	871	537
75°	279	368	482	564	586	296
85°	61	113	123	122	123	73
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1679.7	1679.7	1679.7	1679.7	1679.7
2.5°	1686.7	1674.5	1679.7	1679.7	1672.8
5°	1679.7	1669.3	1678.0	1678.0	1678.0
7.5°	1667.6	1658.9	1672.8	1676.3	1676.3
10°	1648.5	1645.0	1662.4	1667.6	1669.3
12.5°	1627.7	1625.9	1650.2	1657.2	1662.4
15°	1599.9	1603.4	1631.1	1643.3	1648.5
17.5°	1570.4	1577.3	1608.6	1625.9	1631.1
20°	1535.7	1546.1	1582.5	1599.9	1610.3
22.5°	1497.5	1513.1	1551.3	1572.1	1584.3
25°	1455.9	1475.0	1518.3	1544.4	1558.3
27.5°	1410.8	1435.1	1485.4	1514.9	1528.8
30°	1362.2	1389.9	1445.5	1480.2	1497.5
32.5°	1311.8	1344.8	1405.6	1443.7	1464.6
35°	1261.5	1298.0	1363.9	1409.0	1429.8
37.5°	1211.2	1247.6	1320.5	1369.1	1395.1
40°	1153.9	1197.3	1275.4	1329.2	1355.2
42.5°	1098.4	1145.3	1228.6	1287.6	1315.3
45°	1037.7	1093.2	1180.0	1245.9	1275.4
47.5°	982.2	1037.7	1131.4	1200.8	1233.8
50°	921.4	980.4	1079.3	1155.7	1190.4
52.5°	862.4	923.2	1027.3	1108.8	1143.5
55°	798.2	867.6	973.5	1058.5	1094.9
57.5°	734.0	808.6	917.9	1006.4	1042.9
60°	671.5	747.9	862.4	950.9	989.1
62.5°	609.1	685.4	805.2	895.4	931.8
65°	543.1	623.0	742.7	834.7	871.1
67.5°	477.2	560.5	680.2	772.2	806.9
70°	407.8	496.3	616.0	706.2	741.0
72.5°	343.6	432.1	550.1	638.6	671.5
75°	279.4	367.9	482.4	564.0	586.5
77.5°	216.9	305.4	407.8	461.6	466.8
80°	157.9	241.2	324.5	340.1	338.4
82.5°	105.9	180.5	223.8	225.6	230.8
85°	60.7	112.8	123.2	121.5	123.2
87.5°	24.3	39.9	34.7	26.0	26.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)