

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: P388998

Luminaire Tested: **24CZ2-65HE-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: P388998
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-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: 5274.9 lumens
Efficiency: N/A
Efficacy: 107.9 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

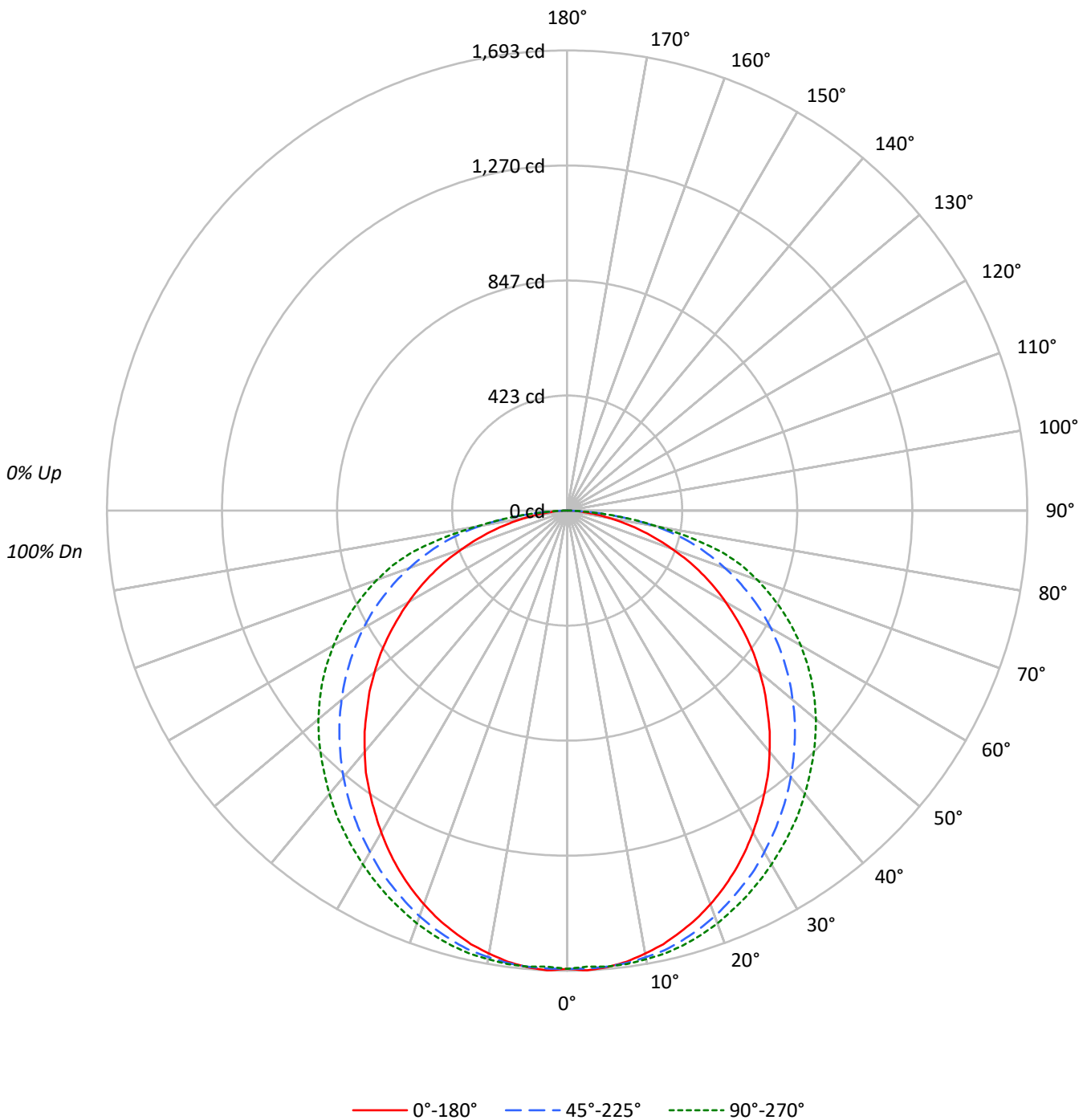
Input Watts (W): 48.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2269	2269	2269
5°	2277	2275	2275
10°	2261	2280	2289
15°	2237	2281	2305
20°	2207	2275	2314
25°	2170	2263	2322
30°	2124	2254	2335
35°	2080	2249	2358
40°	2034	2249	2389
45°	1982	2254	2436
50°	1936	2268	2501
55°	1880	2292	2578
60°	1814	2330	2672
65°	1736	2373	2784
70°	1610	2433	2926
75°	1458	2517	3060
80°	1228	2524	2632
85°	942	1910	1910



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	160.0	3.0
10°-20°	460.5	8.7
20°-30°	699.4	13.3
30°-40°	850.8	16.1
40°-50°	905.8	17.2
50°-60°	862.7	16.4
60°-70°	721.5	13.7
70°-80°	481.0	9.1
80°-90°	133.1	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°	1320.0	25.0
0°-40°	2170.8	41.2
0°-60°	3939.3	74.7
0°-90°	5274.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5274.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1686	1686	1686	1686	1686	
5°	1686	1676	1684	1684	1684	160
15°	1606	1610	1637	1650	1655	453
25°	1461	1481	1524	1550	1564	673
35°	1266	1303	1369	1414	1435	792
45°	1042	1097	1184	1251	1280	805
55°	801	871	977	1062	1099	716
65°	545	625	746	838	874	539
75°	280	369	484	566	589	297
85°	61	113	124	122	124	74
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1686.1	1686.1	1686.1	1686.1	1686.1
2.5°	1693.1	1680.9	1686.1	1686.1	1679.1
5°	1686.1	1675.7	1684.4	1684.4	1684.4
7.5°	1673.9	1665.2	1679.1	1682.6	1682.6
10°	1654.8	1651.3	1668.7	1673.9	1675.7
12.5°	1633.9	1632.1	1656.5	1663.5	1668.7
15°	1606.0	1609.5	1637.3	1649.5	1654.8
17.5°	1576.4	1583.3	1614.7	1632.1	1637.3
20°	1541.5	1552.0	1588.6	1606.0	1616.4
22.5°	1503.2	1518.9	1557.2	1578.1	1590.3
25°	1461.4	1480.6	1524.1	1550.3	1564.2
27.5°	1416.1	1440.5	1491.0	1520.6	1534.6
30°	1367.4	1395.2	1451.0	1485.8	1503.2
32.5°	1316.8	1349.9	1410.9	1449.2	1470.1
35°	1266.3	1302.9	1369.1	1414.4	1435.3
37.5°	1215.8	1252.4	1325.6	1374.3	1400.5
40°	1158.3	1201.9	1280.3	1334.3	1360.4
42.5°	1102.6	1149.6	1233.2	1292.5	1320.3
45°	1041.6	1097.4	1184.5	1250.7	1280.3
47.5°	985.9	1041.6	1135.7	1205.4	1238.5
50°	924.9	984.1	1083.4	1160.1	1194.9
52.5°	865.7	926.7	1031.2	1113.0	1147.9
55°	801.3	870.9	977.2	1062.5	1099.1
57.5°	736.8	811.7	921.4	1010.3	1046.9
60°	674.1	750.7	865.7	954.5	992.9
62.5°	611.4	688.0	808.2	898.8	935.4
65°	545.2	625.3	745.5	837.8	874.4
67.5°	479.0	562.6	682.8	775.1	810.0
70°	409.3	498.2	618.4	708.9	743.8
72.5°	344.9	433.7	552.2	641.0	674.1
75°	280.4	369.3	484.2	566.1	588.7
77.5°	217.7	306.6	409.3	463.3	468.6
80°	158.5	242.1	325.7	341.4	339.7
82.5°	106.3	181.2	224.7	226.4	231.7
85°	61.0	113.2	123.7	121.9	123.7
87.5°	24.4	40.1	34.8	26.1	26.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)