

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: P389835

Luminaire Tested: **24CZ2-60VHE-S-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: P389835
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-1)
Test Lab: INNOVATIONS CENTER(G3)
Issue Date: 2/28/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-60VHE-S-UNV-L940-CD1-SDWPD1-U
Description: 2x4 CRUZE LED TROFFER WITH 4000K, 90 LEDS, AND SMOOTH LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5302.6 lumens
Efficiency: N/A
Efficacy: 137.0 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.27 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

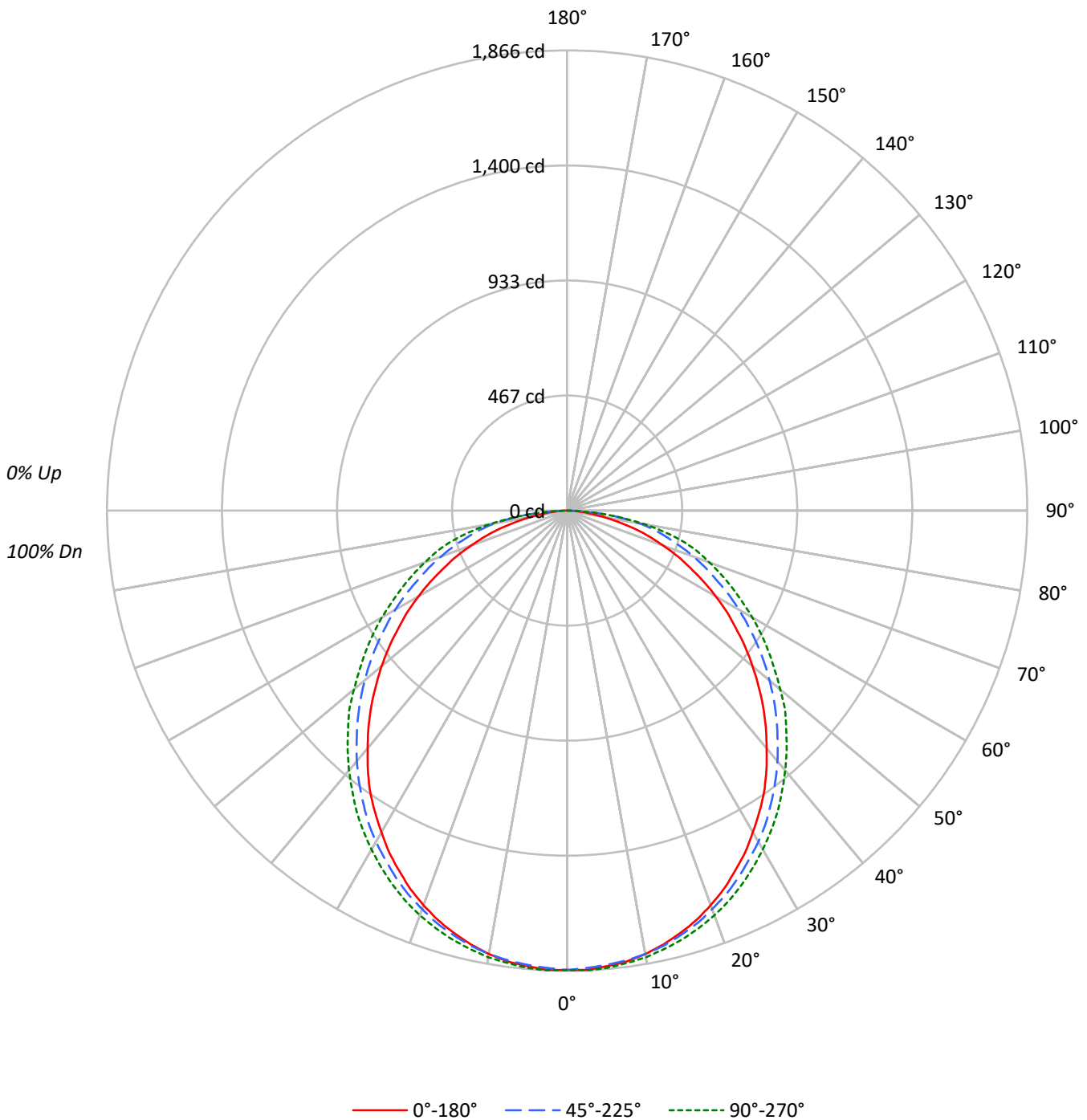
Input Watts (W): 38.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	99	95	106	101	97	93	97	93	90	93	90	88	89	87	85	83
2	98	90	83	77	96	88	81	76	84	79	74	81	76	72	78	74	71	69
3	89	79	70	64	87	77	69	63	74	67	62	71	66	61	69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53	63	57	52	61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42
6	70	56	47	40	68	55	47	40	53	46	40	52	45	40	50	44	39	37
7	64	51	42	36	63	50	42	36	48	41	35	47	40	35	46	39	35	33
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29
9	56	43	34	29	55	42	34	29	41	34	28	40	33	28	39	33	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2506	2506	2506
5°	2505	2498	2514
10°	2494	2494	2513
15°	2471	2482	2508
20°	2438	2462	2501
25°	2393	2438	2485
30°	2339	2410	2465
35°	2288	2371	2446
40°	2210	2331	2417
45°	2138	2285	2391
50°	2055	2242	2362
55°	1964	2201	2339
60°	1872	2167	2334
65°	1754	2129	2349
70°	1624	2140	2412
75°	1454	2180	2548
80°	1175	2310	2493
85°	885	2029	1976



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	176.4	3.3
10°-20°	503.9	9.5
20°-30°	757.5	14.3
30°-40°	902.3	17.0
40°-50°	923.5	17.4
50°-60°	831.4	15.7
60°-70°	652.9	12.3
70°-80°	423.7	8.0
80°-90°	131.1	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°	1437.8	27.1
0°-40°	2340.1	44.1
0°-60°	4094.9	77.2
0°-90°	5302.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5302.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1863	1863	1863	1863	1863	
5°	1854	1858	1849	1860	1861	176
15°	1774	1779	1782	1797	1800	500
25°	1612	1625	1642	1669	1674	743
35°	1393	1410	1443	1479	1489	869
45°	1123	1150	1201	1246	1256	866
55°	837	874	938	987	997	750
65°	551	593	669	724	738	548
75°	280	334	419	477	490	296
85°	57	106	131	128	128	69
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1862.8	1862.8	1862.8	1862.8	1862.8
2.5°	1864.5	1864.5	1856.1	1864.5	1866.2
5°	1854.4	1857.8	1849.4	1859.5	1861.2
7.5°	1844.3	1844.3	1839.3	1849.4	1851.0
10°	1825.8	1827.5	1825.8	1837.6	1839.3
12.5°	1802.2	1805.6	1807.3	1819.0	1820.7
15°	1773.6	1778.6	1782.0	1797.2	1800.5
17.5°	1741.6	1746.6	1755.0	1771.9	1775.3
20°	1702.8	1709.6	1719.7	1741.6	1746.6
22.5°	1660.7	1667.5	1684.3	1704.5	1712.9
25°	1611.9	1625.4	1642.2	1669.1	1674.2
27.5°	1563.0	1574.8	1596.7	1625.4	1632.1
30°	1505.8	1524.3	1551.2	1579.9	1586.6
32.5°	1450.2	1468.7	1500.7	1531.0	1539.5
35°	1392.9	1409.8	1443.4	1478.8	1488.9
37.5°	1327.2	1349.1	1386.2	1421.6	1431.7
40°	1258.2	1285.1	1327.2	1364.3	1376.1
42.5°	1192.5	1221.1	1263.2	1303.6	1317.1
45°	1123.4	1150.4	1200.9	1246.4	1256.5
47.5°	1052.7	1083.0	1136.9	1182.4	1199.2
50°	981.9	1013.9	1071.2	1118.4	1128.5
52.5°	911.2	944.9	1005.5	1056.1	1061.1
55°	837.1	874.2	938.2	987.0	997.1
57.5°	769.7	801.7	870.8	921.3	933.1
60°	695.6	731.0	805.1	852.3	867.4
62.5°	624.9	661.9	739.4	786.6	800.0
65°	550.8	592.9	668.7	724.2	737.7
67.5°	486.8	527.2	608.0	661.9	675.4
70°	412.7	458.1	544.0	599.6	613.1
72.5°	348.7	395.8	481.7	535.6	555.8
75°	279.6	333.5	419.4	476.7	490.1
77.5°	212.2	274.5	362.1	405.9	405.9
80°	151.6	217.3	298.1	318.3	321.7
82.5°	99.4	163.4	220.6	219.0	219.0
85°	57.3	106.1	131.4	128.0	128.0
87.5°	21.9	43.8	47.2	47.2	45.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)