

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: P276655

Luminaire Tested: **24CZ2-60HE-S-UNV-L92765-W2A1-U-4500K**

Issue Date: 3/3/2020

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: P276655
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-1)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-60HE-S-UNV-L92765-W2A1-U-4500K
Description: CRUZE 2.0 2x4 TUNABLE WHITE LED TROFFER WITH SMOOTH LENS
Light Source: (336) 90 CRI LEDS TUNED TO 4500K CCT
Ballast/Driver: ELECTRONIC DRIVER
Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5432.2 lumens
Efficiency: N/A
Efficacy: 120.4 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

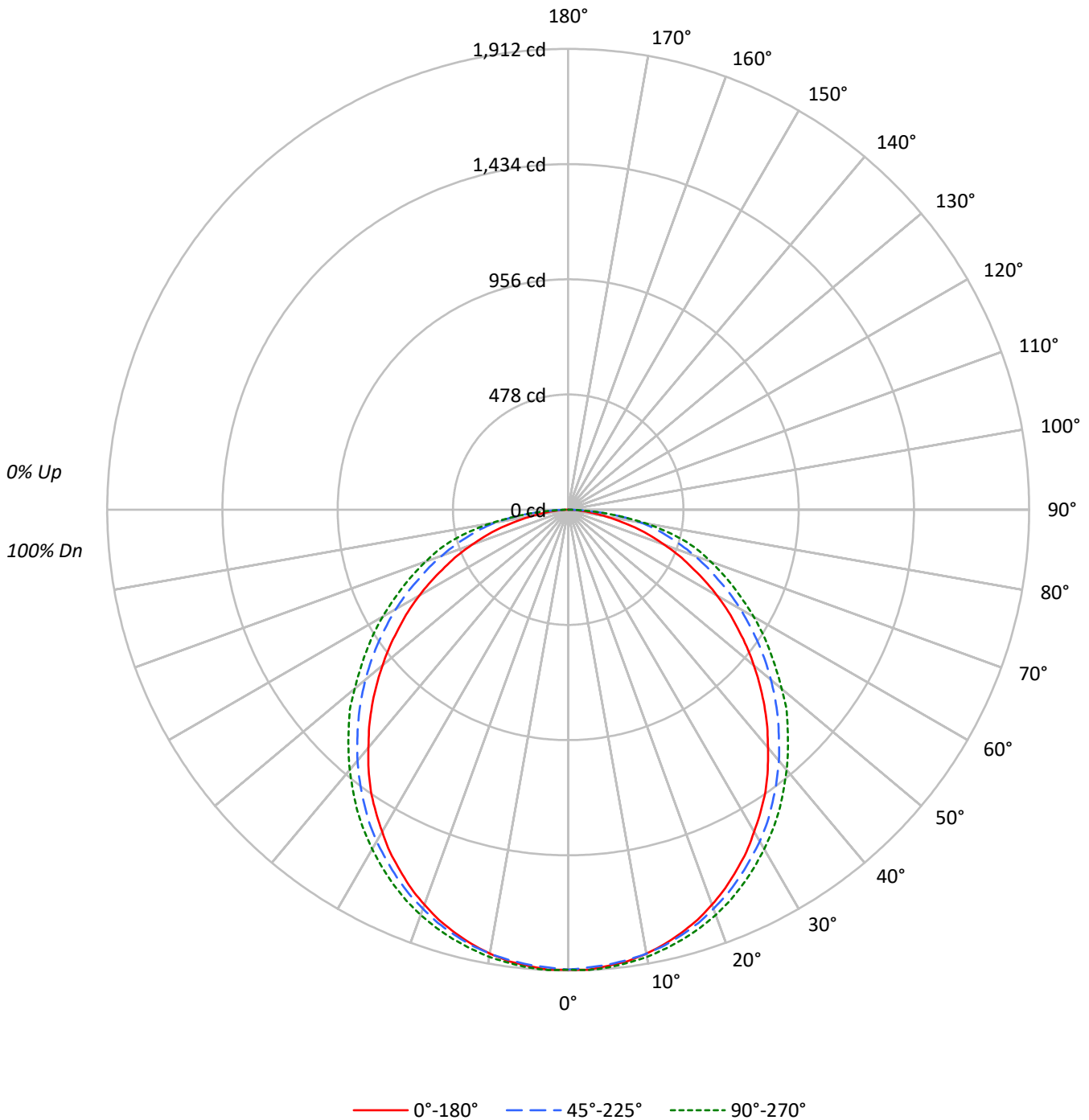
Input Watts (W): 45.105
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2568	2568	2568
5°	2566	2559	2575
10°	2555	2555	2574
15°	2531	2543	2569
20°	2498	2522	2562
25°	2451	2498	2546
30°	2397	2469	2525
35°	2344	2429	2505
40°	2264	2388	2476
45°	2190	2341	2449
50°	2106	2297	2420
55°	2012	2255	2396
60°	1918	2220	2391
65°	1796	2181	2406
70°	1663	2192	2471
75°	1489	2233	2610
80°	1203	2366	2554
85°	906	2078	2024



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	180.7	3.3
10°-20°	516.2	9.5
20°-30°	776.0	14.3
30°-40°	924.3	17.0
40°-50°	946.0	17.4
50°-60°	851.7	15.7
60°-70°	668.9	12.3
70°-80°	434.1	8.0
80°-90°	134.3	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°	1472.9	27.1
0°-40°	2397.2	44.1
0°-60°	4195.0	77.2
0°-90°	5432.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5432.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1908	1908	1908	1908	1908	
5°	1900	1903	1895	1905	1907	181
15°	1817	1822	1826	1841	1844	512
25°	1651	1665	1682	1710	1715	761
35°	1427	1444	1479	1515	1525	890
45°	1151	1178	1230	1277	1287	887
55°	858	896	961	1011	1022	769
65°	564	607	685	742	756	562
75°	286	342	430	488	502	303
85°	59	109	135	131	131	71
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1908.4	1908.4	1908.4	1908.4	1908.4
2.5°	1910.1	1910.1	1901.5	1910.1	1911.8
5°	1899.7	1903.2	1894.6	1904.9	1906.6
7.5°	1889.4	1889.4	1884.2	1894.6	1896.3
10°	1870.4	1872.1	1870.4	1882.5	1884.2
12.5°	1846.2	1849.7	1851.4	1863.5	1865.2
15°	1816.9	1822.1	1825.5	1841.1	1844.5
17.5°	1784.1	1789.3	1797.9	1815.2	1818.6
20°	1744.4	1751.3	1761.7	1784.1	1789.3
22.5°	1701.3	1708.2	1725.5	1746.2	1754.8
25°	1651.3	1665.1	1682.3	1709.9	1715.1
27.5°	1601.2	1613.3	1635.7	1665.1	1672.0
30°	1542.6	1561.5	1589.1	1618.5	1625.4
32.5°	1485.6	1504.6	1537.4	1568.4	1577.1
35°	1427.0	1444.2	1478.7	1515.0	1525.3
37.5°	1359.7	1382.1	1420.1	1456.3	1466.6
40°	1288.9	1316.5	1359.7	1397.6	1409.7
42.5°	1221.6	1251.0	1294.1	1335.5	1349.3
45°	1150.9	1178.5	1230.3	1276.8	1287.2
47.5°	1078.4	1109.5	1164.7	1211.3	1228.5
50°	1005.9	1038.7	1097.4	1145.7	1156.1
52.5°	933.5	968.0	1030.1	1081.9	1087.0
55°	857.6	895.5	961.1	1011.1	1021.5
57.5°	788.5	821.3	892.1	943.8	955.9
60°	712.6	748.9	824.8	873.1	888.6
62.5°	640.1	678.1	757.5	805.8	819.6
65°	564.2	607.4	685.0	741.9	755.8
67.5°	498.7	540.1	622.9	678.1	691.9
70°	422.7	469.3	557.3	614.3	628.1
72.5°	357.2	405.5	493.5	548.7	569.4
75°	286.4	341.6	429.6	488.3	502.1
77.5°	217.4	281.3	371.0	415.8	415.8
80°	155.3	222.6	305.4	326.1	329.6
82.5°	101.8	167.4	226.0	224.3	224.3
85°	58.7	108.7	134.6	131.1	131.1
87.5°	22.4	44.9	48.3	48.3	46.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)