

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: P276718

Luminaire Tested: **24CZ2-45-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: P276718
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: 24CZ2-45-S-UNV-L92765-W2A1-U-4500K
Description: CRUZE 2.0 2x4 TUNABLE WHITE LED TROFFER WITH SMOOTH LENS
Light Source: (168) 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: 4081.3 lumens
Efficiency: N/A
Efficacy: 114.6 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

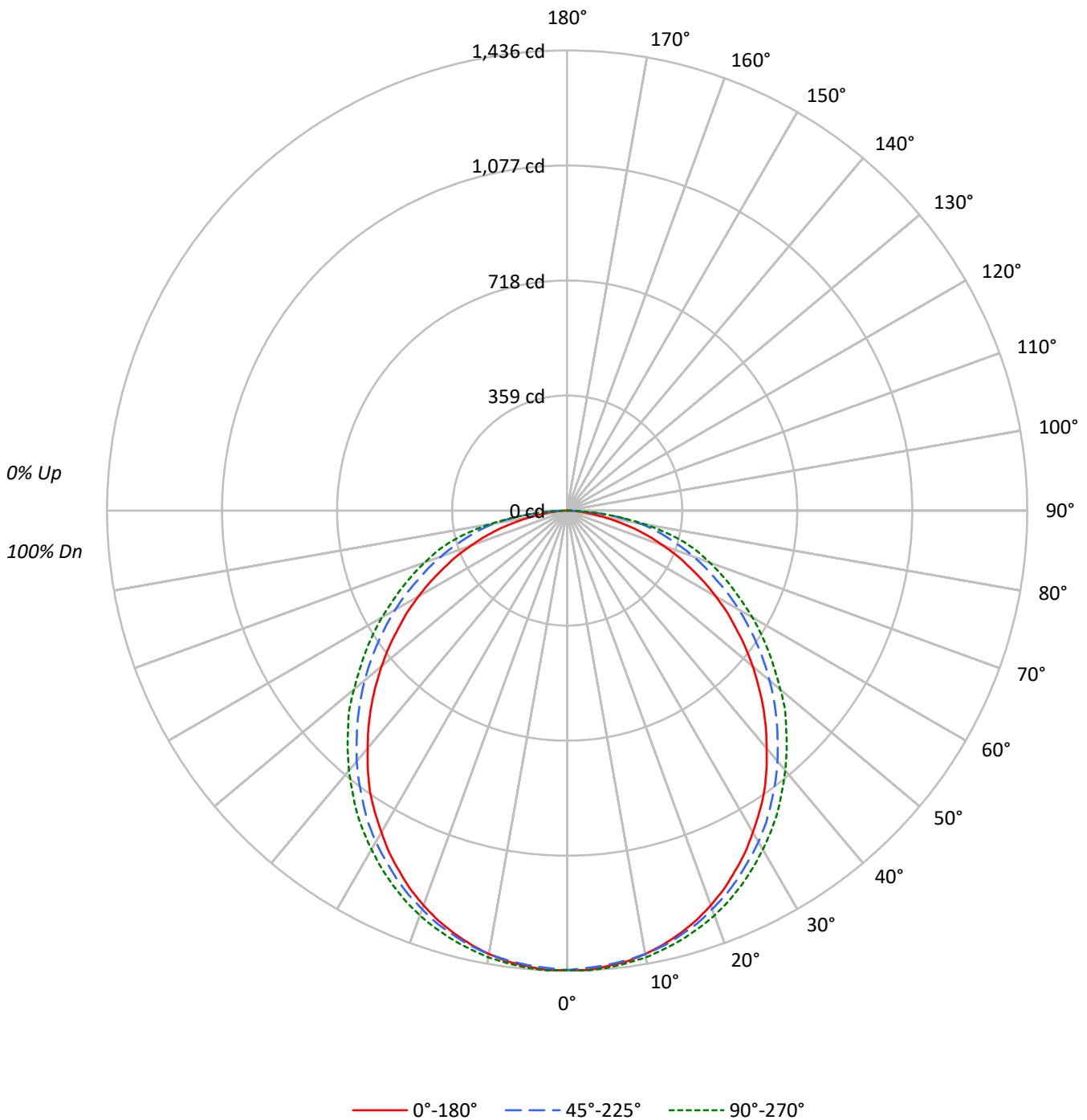
Input Watts (W): 35.619
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1929	1929	1929
5°	1928	1922	1935
10°	1920	1920	1934
15°	1902	1911	1930
20°	1877	1895	1925
25°	1842	1877	1913
30°	1801	1855	1897
35°	1761	1825	1882
40°	1701	1794	1860
45°	1645	1759	1840
50°	1582	1726	1818
55°	1511	1694	1800
60°	1441	1668	1796
65°	1350	1639	1808
70°	1249	1647	1856
75°	1119	1678	1961
80°	904	1778	1918
85°	681	1561	1521



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	135.7	3.3
10°-20°	387.9	9.5
20°-30°	583.0	14.3
30°-40°	694.5	17.0
40°-50°	710.8	17.4
50°-60°	639.9	15.7
60°-70°	502.5	12.3
70°-80°	326.2	8.0
80°-90°	100.9	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°	1106.6	27.1
0°-40°	1801.1	44.1
0°-60°	3151.8	77.2
0°-90°	4081.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4081.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1434	1434	1434	1434	1434	
5°	1427	1430	1423	1431	1432	136
15°	1365	1369	1372	1383	1386	385
25°	1241	1251	1264	1285	1289	572
35°	1072	1085	1111	1138	1146	669
45°	865	885	924	959	967	667
55°	644	673	722	760	768	578
65°	424	456	515	557	568	422
75°	215	257	323	367	377	228
85°	44	82	101	98	98	53
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1433.8	1433.8	1433.8	1433.8	1433.8
2.5°	1435.1	1435.1	1428.6	1435.1	1436.4
5°	1427.3	1429.9	1423.4	1431.2	1432.5
7.5°	1419.5	1419.5	1415.7	1423.4	1424.7
10°	1405.3	1406.6	1405.3	1414.4	1415.7
12.5°	1387.1	1389.7	1391.0	1400.1	1401.4
15°	1365.1	1369.0	1371.6	1383.2	1385.8
17.5°	1340.5	1344.4	1350.8	1363.8	1366.4
20°	1310.6	1315.8	1323.6	1340.5	1344.4
22.5°	1278.2	1283.4	1296.4	1311.9	1318.4
25°	1240.6	1251.0	1264.0	1284.7	1288.6
27.5°	1203.0	1212.1	1229.0	1251.0	1256.2
30°	1159.0	1173.2	1194.0	1216.0	1221.2
32.5°	1116.2	1130.4	1155.1	1178.4	1184.9
35°	1072.1	1085.1	1111.0	1138.2	1146.0
37.5°	1021.6	1038.4	1066.9	1094.1	1101.9
40°	968.4	989.1	1021.6	1050.1	1059.1
42.5°	917.8	939.9	972.3	1003.4	1013.8
45°	864.7	885.4	924.3	959.3	967.1
47.5°	810.2	833.6	875.1	910.1	923.0
50°	755.8	780.4	824.5	860.8	868.6
52.5°	701.3	727.3	773.9	812.8	816.7
55°	644.3	672.8	722.1	759.7	767.5
57.5°	592.4	617.1	670.2	709.1	718.2
60°	535.4	562.6	619.7	656.0	667.6
62.5°	481.0	509.5	569.1	605.4	615.8
65°	423.9	456.3	514.7	557.4	567.8
67.5°	374.7	405.8	468.0	509.5	519.9
70°	317.6	352.6	418.7	461.5	471.9
72.5°	268.4	304.7	370.8	412.3	427.8
75°	215.2	256.7	322.8	366.9	377.2
77.5°	163.3	211.3	278.7	312.4	312.4
80°	116.7	167.2	229.5	245.0	247.6
82.5°	76.5	125.7	169.8	168.5	168.5
85°	44.1	81.7	101.1	98.5	98.5
87.5°	16.9	33.7	36.3	36.3	35.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)