

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: P276624

Luminaire Tested: **24CZ2-45HE-S-UNV-L92765-W2A1-U-2700K**

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: P276624
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: 24CZ2-45HE-S-UNV-L92765-W2A1-U-2700K
Description: CRUZE 2.0 2x4 TUNABLE WHITE LED TROFFER WITH SMOOTH LENS
Light Source: (336) 90 CRI LEDS TUNED TO 2700K CCT
Ballast/Driver: ELECTRONIC DRIVER
Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3493.9 lumens
Efficiency: N/A
Efficacy: 111.5 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

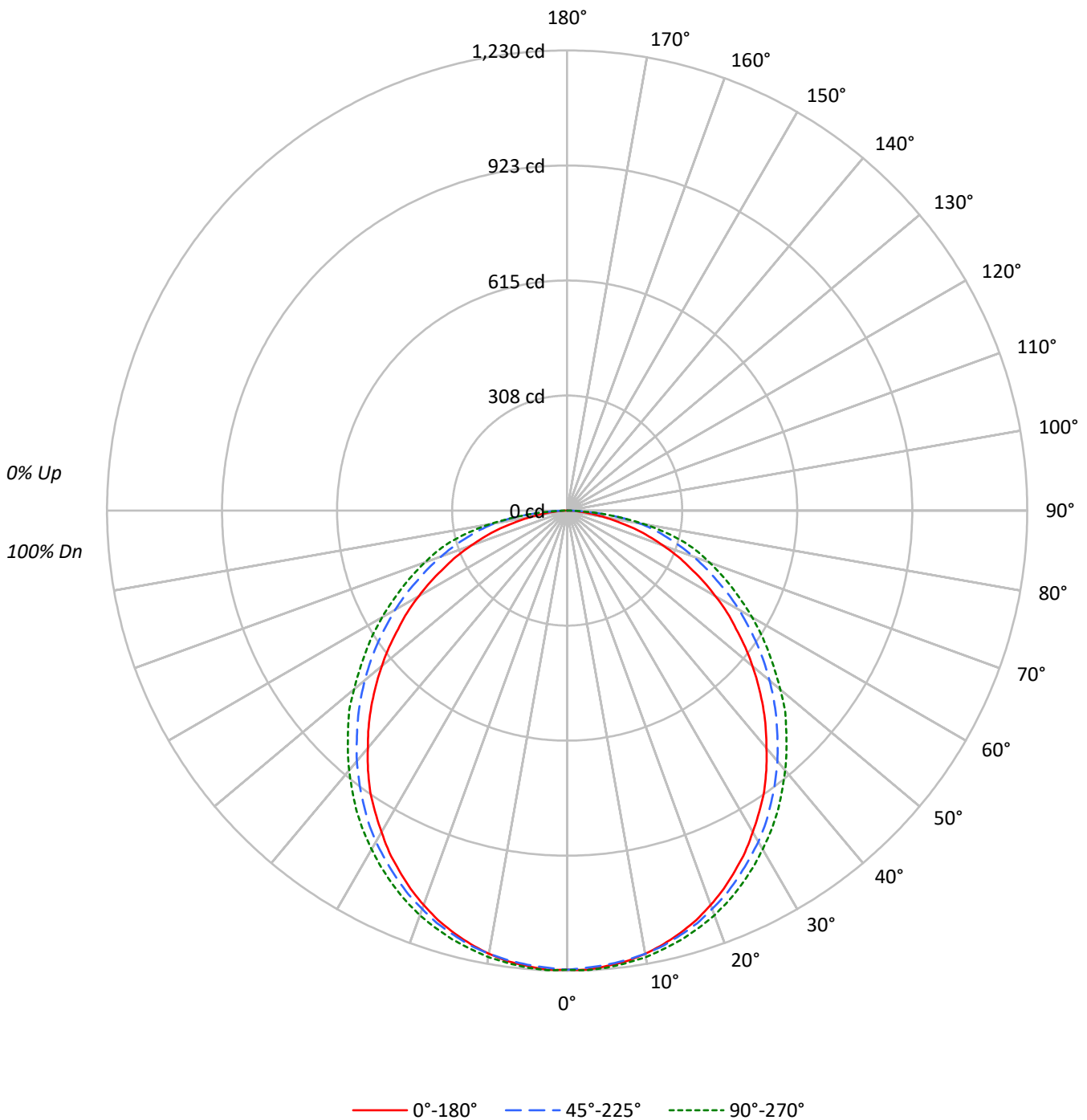
Input Watts (W): 31.341
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1651	1651	1651
5°	1650	1646	1656
10°	1644	1644	1656
15°	1628	1636	1653
20°	1607	1622	1648
25°	1577	1606	1638
30°	1542	1588	1624
35°	1508	1562	1611
40°	1456	1536	1593
45°	1408	1506	1575
50°	1354	1477	1557
55°	1294	1450	1541
60°	1233	1428	1538
65°	1155	1403	1548
70°	1070	1410	1589
75°	958	1436	1679
80°	774	1522	1643
85°	582	1337	1301



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	116.2	3.3
10°-20°	332.0	9.5
20°-30°	499.1	14.3
30°-40°	594.5	17.0
40°-50°	608.5	17.4
50°-60°	547.8	15.7
60°-70°	430.2	12.3
70°-80°	279.2	8.0
80°-90°	86.4	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°	947.3	27.1
0°-40°	1541.9	44.1
0°-60°	2698.1	77.2
0°-90°	3493.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3493.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1227	1227	1227	1227	1227	
5°	1222	1224	1218	1225	1226	116
15°	1169	1172	1174	1184	1186	330
25°	1062	1071	1082	1100	1103	489
35°	918	929	951	974	981	573
45°	740	758	791	821	828	571
55°	552	576	618	650	657	494
65°	363	391	441	477	486	361
75°	184	220	276	314	323	195
85°	38	70	87	84	84	46
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1227.4	1227.4	1227.4	1227.4	1227.4
2.5°	1228.5	1228.5	1223.0	1228.5	1229.6
5°	1221.9	1224.1	1218.5	1225.2	1226.3
7.5°	1215.2	1215.2	1211.9	1218.5	1219.7
10°	1203.0	1204.1	1203.0	1210.8	1211.9
12.5°	1187.5	1189.7	1190.8	1198.6	1199.7
15°	1168.6	1171.9	1174.2	1184.1	1186.4
17.5°	1147.5	1150.9	1156.4	1167.5	1169.7
20°	1122.0	1126.4	1133.1	1147.5	1150.9
22.5°	1094.3	1098.7	1109.8	1123.1	1128.7
25°	1062.1	1070.9	1082.0	1099.8	1103.1
27.5°	1029.9	1037.7	1052.1	1070.9	1075.4
30°	992.2	1004.4	1022.1	1041.0	1045.4
32.5°	955.5	967.7	988.8	1008.8	1014.3
35°	917.8	928.9	951.1	974.4	981.1
37.5°	874.5	888.9	913.4	936.7	943.3
40°	829.0	846.8	874.5	898.9	906.7
42.5°	785.7	804.6	832.3	859.0	867.9
45°	740.2	758.0	791.3	821.2	827.9
47.5°	693.6	713.6	749.1	779.1	790.2
50°	647.0	668.1	705.8	736.9	743.6
52.5°	600.4	622.6	662.5	695.8	699.2
55°	551.6	576.0	618.2	650.3	657.0
57.5°	507.2	528.3	573.8	607.1	614.8
60°	458.3	481.6	530.5	561.6	571.5
62.5°	411.7	436.1	487.2	518.3	527.1
65°	362.9	390.6	440.6	477.2	486.1
67.5°	320.7	347.4	400.6	436.1	445.0
70°	271.9	301.9	358.5	395.1	404.0
72.5°	229.7	260.8	317.4	352.9	366.2
75°	184.2	219.7	276.3	314.1	322.9
77.5°	139.8	180.9	238.6	267.5	267.5
80°	99.9	143.2	196.4	209.8	212.0
82.5°	65.5	107.6	145.4	144.3	144.3
85°	37.7	69.9	86.6	84.3	84.3
87.5°	14.4	28.9	31.1	31.1	30.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)