

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: P276629

Luminaire Tested: **24CZ2-45HE-S-UNV-L92765-W2A1-U-5000K**

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: P276629
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-5000K
Description: CRUZE 2.0 2x4 TUNABLE WHITE LED TROFFER WITH SMOOTH LENS
Light Source: (336) 90 CRI LEDS TUNED TO 5000K CCT
Ballast/Driver: ELECTRONIC DRIVER
Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4121.1 lumens
Efficiency: N/A
Efficacy: 128.1 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

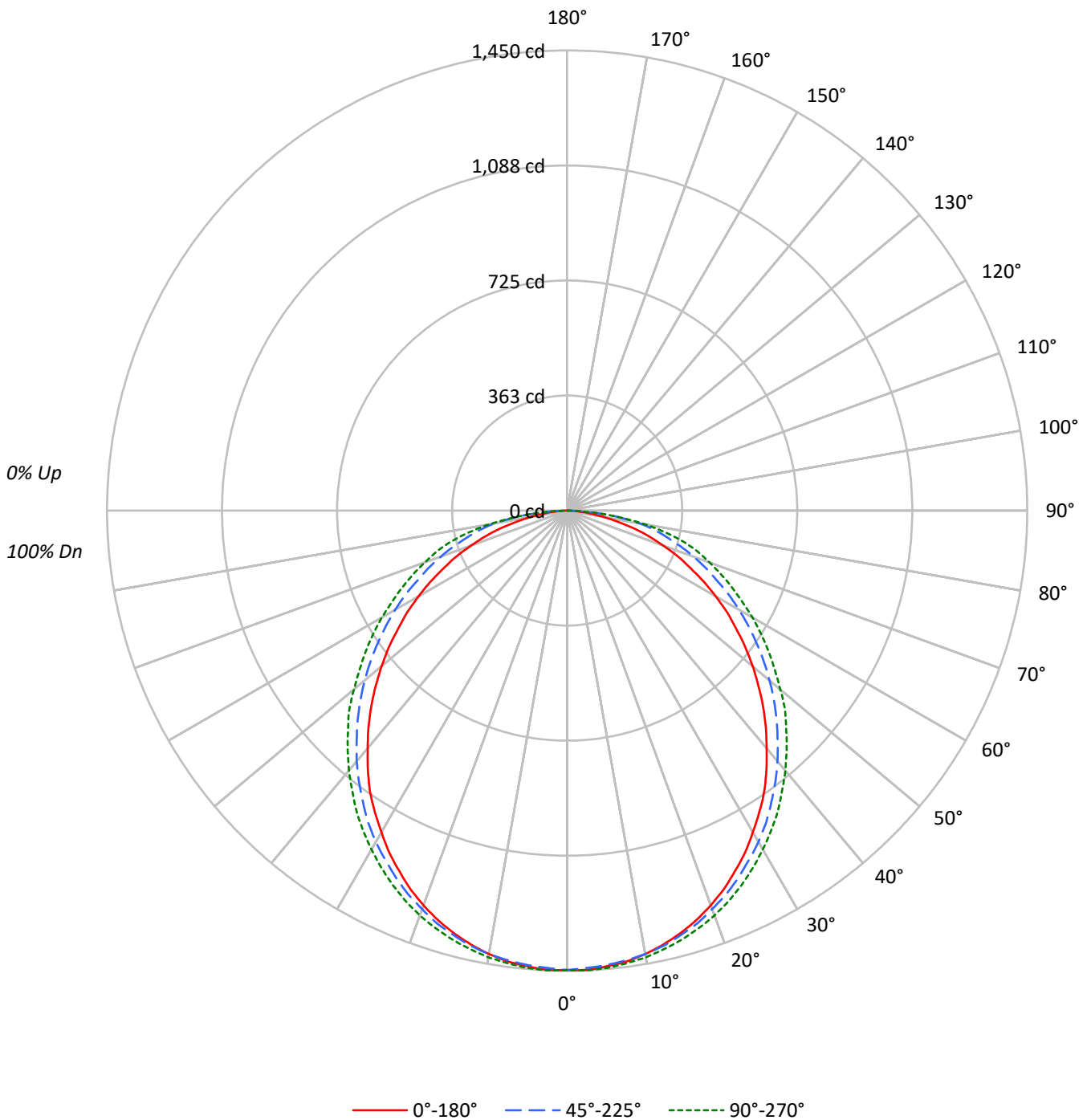
Input Watts (W): 32.178
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1948	1948	1948
5°	1947	1941	1954
10°	1939	1939	1953
15°	1920	1929	1949
20°	1895	1914	1944
25°	1860	1895	1932
30°	1818	1873	1916
35°	1778	1843	1901
40°	1717	1812	1878
45°	1661	1776	1858
50°	1598	1743	1836
55°	1526	1710	1818
60°	1455	1684	1814
65°	1363	1655	1825
70°	1262	1663	1875
75°	1130	1694	1980
80°	913	1795	1937
85°	687	1576	1536



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	137.1	3.3
10°-20°	391.6	9.5
20°-30°	588.7	14.3
30°-40°	701.3	17.0
40°-50°	717.7	17.4
50°-60°	646.1	15.7
60°-70°	507.4	12.3
70°-80°	329.3	8.0
80°-90°	101.9	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°	1117.4	27.1
0°-40°	1818.7	44.1
0°-60°	3182.5	77.2
0°-90°	4121.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4121.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1448	1448	1448	1448	1448	
5°	1441	1444	1437	1445	1446	137
15°	1378	1382	1385	1397	1399	389
25°	1253	1263	1276	1297	1301	577
35°	1083	1096	1122	1149	1157	675
45°	873	894	933	969	976	673
55°	651	679	729	767	775	583
65°	428	461	520	563	573	426
75°	217	259	326	370	381	230
85°	44	82	102	100	100	54
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1447.8	1447.8	1447.8	1447.8	1447.8
2.5°	1449.1	1449.1	1442.5	1449.1	1450.4
5°	1441.2	1443.8	1437.3	1445.2	1446.5
7.5°	1433.4	1433.4	1429.4	1437.3	1438.6
10°	1419.0	1420.3	1419.0	1428.1	1429.4
12.5°	1400.6	1403.3	1404.6	1413.7	1415.0
15°	1378.4	1382.3	1384.9	1396.7	1399.3
17.5°	1353.5	1357.4	1364.0	1377.1	1379.7
20°	1323.4	1328.6	1336.5	1353.5	1357.4
22.5°	1290.7	1295.9	1309.0	1324.7	1331.3
25°	1252.7	1263.2	1276.3	1297.2	1301.2
27.5°	1214.8	1223.9	1240.9	1263.2	1268.4
30°	1170.3	1184.7	1205.6	1227.9	1233.1
32.5°	1127.1	1141.5	1166.3	1189.9	1196.4
35°	1082.6	1095.6	1121.8	1149.3	1157.2
37.5°	1031.5	1048.5	1077.3	1104.8	1112.7
40°	977.8	998.8	1031.5	1060.3	1069.5
42.5°	926.8	949.0	981.8	1013.2	1023.6
45°	873.1	894.1	933.3	968.7	976.5
47.5°	818.1	841.7	883.6	918.9	932.0
50°	763.2	788.0	832.5	869.2	877.0
52.5°	708.2	734.4	781.5	820.8	824.7
55°	650.6	679.4	729.1	767.1	774.9
57.5°	598.2	623.1	676.8	716.0	725.2
60°	540.6	568.1	625.7	662.4	674.1
62.5°	485.6	514.4	574.7	611.3	621.8
65°	428.0	460.8	519.7	562.9	573.3
67.5°	378.3	409.7	472.6	514.4	524.9
70°	320.7	356.1	422.8	466.0	476.5
72.5°	271.0	307.6	374.4	416.3	432.0
75°	217.3	259.2	325.9	370.5	380.9
77.5°	164.9	213.4	281.4	315.5	315.5
80°	117.8	168.9	231.7	247.4	250.0
82.5°	77.2	127.0	171.5	170.2	170.2
85°	44.5	82.5	102.1	99.5	99.5
87.5°	17.0	34.0	36.7	36.7	35.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)