

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: P276461

Luminaire Tested: **24CZ2-50-S-UNV-L93050-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: P276461
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: 24CZ2-50-S-UNV-L93050-W2A1-U-5000K
Description: CRUZE 2.0 2x4 TUNABLE WHITE LED TROFFER WITH SMOOTH LENS
Light Source: (168) 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: 4643.8 lumens
Efficiency: N/A
Efficacy: 112.2 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

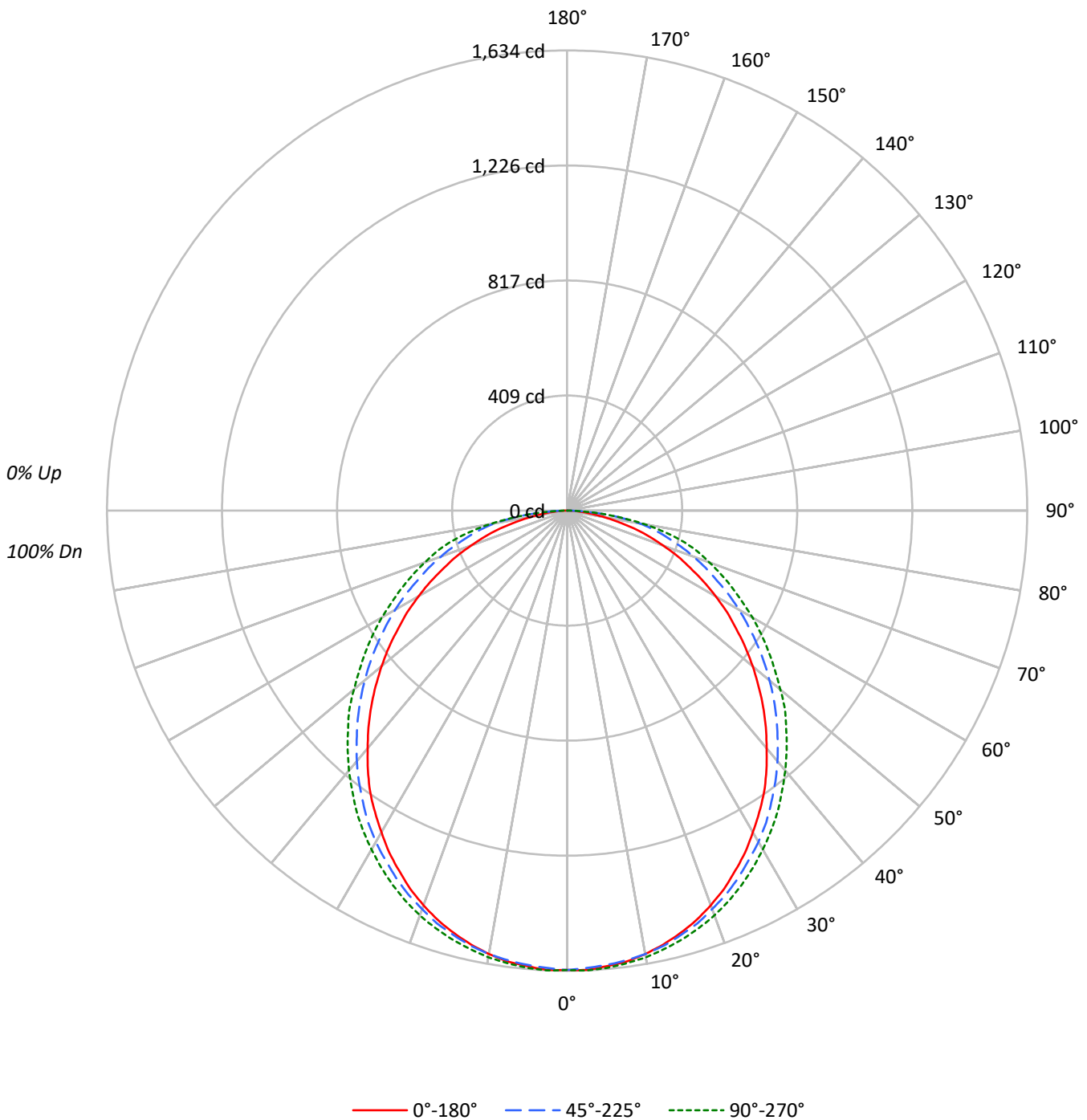
Input Watts (W): 41.378862
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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					100			
1	108	103	99	95	106	101	97	93	97	93	90	93	90	88	89	87	85	83					83			
2	98	90	83	77	96	88	81	76	84	79	74	81	76	72	78	74	71	69					69			
3	89	79	70	64	87	77	69	63	74	67	62	71	66	61	69	64	60	58					58			
4	82	70	61	54	80	68	60	54	66	59	53	63	57	52	61	56	51	49					49			
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42					42			
6	70	56	47	40	68	55	47	40	53	46	40	52	45	40	50	44	39	37					37			
7	64	51	42	36	63	50	42	36	48	41	35	47	40	35	46	39	35	33					33			
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29					29			
9	56	43	34	29	55	42	34	29	41	34	28	40	33	28	39	33	28	26					26			
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24					24			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2195	2195	2195
5°	2193	2187	2201
10°	2184	2184	2201
15°	2164	2174	2196
20°	2135	2156	2190
25°	2096	2135	2177
30°	2049	2111	2159
35°	2004	2076	2142
40°	1935	2041	2117
45°	1872	2001	2094
50°	1800	1964	2069
55°	1720	1927	2048
60°	1639	1897	2044
65°	1535	1864	2057
70°	1422	1874	2112
75°	1273	1909	2231
80°	1029	2023	2183
85°	775	1777	1731



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	154.4	3.3
10°-20°	441.3	9.5
20°-30°	663.4	14.3
30°-40°	790.2	17.0
40°-50°	808.7	17.4
50°-60°	728.1	15.7
60°-70°	571.8	12.3
70°-80°	371.1	8.0
80°-90°	114.8	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°	1259.1	27.1
0°-40°	2049.3	44.1
0°-60°	3586.2	77.2
0°-90°	4643.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4643.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1631	1631	1631	1631	1631	
5°	1624	1627	1620	1628	1630	154
15°	1553	1558	1561	1574	1577	438
25°	1412	1423	1438	1462	1466	650
35°	1220	1235	1264	1295	1304	761
45°	984	1008	1052	1092	1100	759
55°	733	766	822	864	873	657
65°	482	519	586	634	646	480
75°	245	292	367	417	429	259
85°	50	93	115	112	112	61
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1631.4	1631.4	1631.4	1631.4	1631.4
2.5°	1632.9	1632.9	1625.5	1632.9	1634.4
5°	1624.0	1627.0	1619.6	1628.5	1629.9
7.5°	1615.2	1615.2	1610.8	1619.6	1621.1
10°	1598.9	1600.4	1598.9	1609.3	1610.8
12.5°	1578.3	1581.2	1582.7	1593.0	1594.5
15°	1553.2	1557.6	1560.6	1573.9	1576.8
17.5°	1525.2	1529.6	1537.0	1551.7	1554.7
20°	1491.3	1497.2	1506.0	1525.2	1529.6
22.5°	1454.4	1460.3	1475.0	1492.7	1500.1
25°	1411.6	1423.4	1438.2	1461.8	1466.2
27.5°	1368.8	1379.2	1398.3	1423.4	1429.3
30°	1318.7	1334.9	1358.5	1383.6	1389.5
32.5°	1270.0	1286.2	1314.3	1340.8	1348.2
35°	1219.9	1234.6	1264.1	1295.1	1303.9
37.5°	1162.3	1181.5	1214.0	1244.9	1253.8
40°	1101.9	1125.5	1162.3	1194.8	1205.1
42.5°	1044.3	1069.4	1106.3	1141.7	1153.5
45°	983.9	1007.5	1051.7	1091.5	1100.4
47.5°	921.9	948.5	995.7	1035.5	1050.2
50°	860.0	888.0	938.1	979.4	988.3
52.5°	798.0	827.5	880.6	924.9	929.3
55°	733.1	765.5	821.6	864.4	873.2
57.5°	674.1	702.1	762.6	806.9	817.2
60°	609.2	640.2	705.1	746.4	759.6
62.5°	547.2	579.7	647.5	688.8	700.6
65°	482.3	519.2	585.6	634.3	646.1
67.5°	426.3	461.7	532.5	579.7	591.5
70°	361.4	401.2	476.4	525.1	536.9
72.5°	305.3	346.6	421.9	469.1	486.8
75°	244.9	292.1	367.3	417.4	429.2
77.5°	185.9	240.4	317.1	355.5	355.5
80°	132.8	190.3	261.1	278.8	281.7
82.5°	87.0	143.1	193.2	191.8	191.8
85°	50.2	92.9	115.1	112.1	112.1
87.5°	19.2	38.4	41.3	41.3	39.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)