

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: P276637

Luminaire Tested: **24CZ2-50HE-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: P276637
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: 24CZ2-50HE-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: 4526.7 lumens
Efficiency: N/A
Efficacy: 124.5 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.27 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

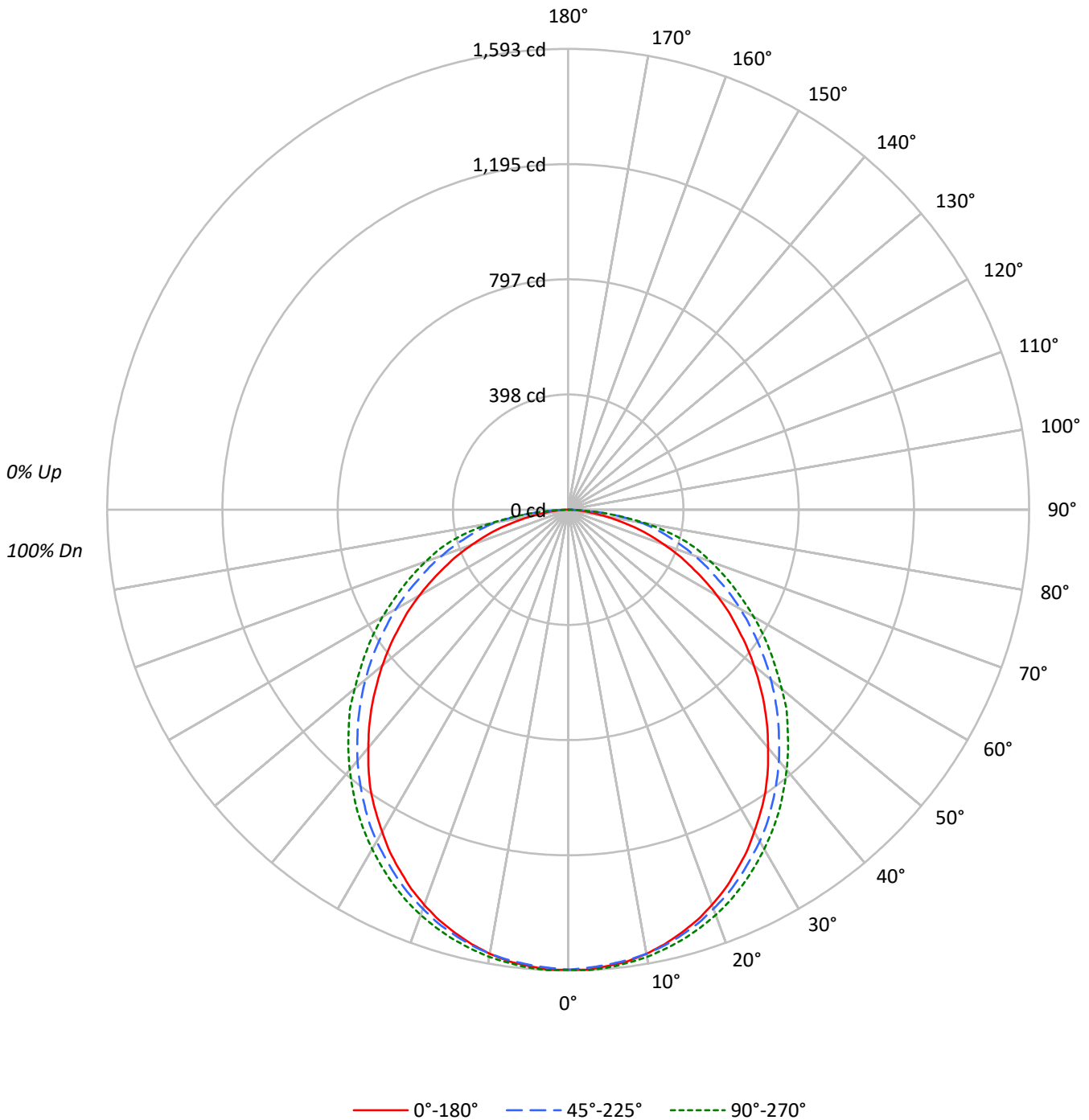
Input Watts (W): 36.363
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2140	2140	2140
5°	2138	2132	2146
10°	2129	2129	2145
15°	2109	2119	2141
20°	2081	2102	2135
25°	2043	2081	2122
30°	1997	2057	2104
35°	1953	2024	2088
40°	1887	1990	2063
45°	1825	1951	2041
50°	1755	1914	2016
55°	1676	1879	1997
60°	1598	1850	1993
65°	1497	1817	2005
70°	1386	1827	2059
75°	1241	1861	2175
80°	1003	1972	2128
85°	755	1732	1687



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	150.5	3.3
10°-20°	430.2	9.5
20°-30°	646.6	14.3
30°-40°	770.3	17.0
40°-50°	788.3	17.4
50°-60°	709.7	15.7
60°-70°	557.4	12.3
70°-80°	361.7	8.0
80°-90°	111.9	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°	1227.4	27.1
0°-40°	1997.6	44.1
0°-60°	3495.7	77.2
0°-90°	4526.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4526.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1590	1590	1590	1590	1590	
5°	1583	1586	1579	1587	1589	150
15°	1514	1518	1521	1534	1537	427
25°	1376	1388	1402	1425	1429	634
35°	1189	1204	1232	1262	1271	742
45°	959	982	1025	1064	1073	739
55°	715	746	801	843	851	641
65°	470	506	571	618	630	468
75°	239	285	358	407	418	253
85°	49	91	112	109	109	59
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1590.2	1590.2	1590.2	1590.2	1590.2
2.5°	1591.7	1591.7	1584.5	1591.7	1593.1
5°	1583.1	1585.9	1578.7	1587.4	1588.8
7.5°	1574.4	1574.4	1570.1	1578.7	1580.2
10°	1558.6	1560.0	1558.6	1568.7	1570.1
12.5°	1538.5	1541.4	1542.8	1552.9	1554.3
15°	1514.0	1518.4	1521.2	1534.2	1537.0
17.5°	1486.7	1491.0	1498.2	1512.6	1515.5
20°	1453.6	1459.4	1468.0	1486.7	1491.0
22.5°	1417.7	1423.5	1437.8	1455.1	1462.3
25°	1376.0	1387.5	1401.9	1424.9	1429.2
27.5°	1334.3	1344.4	1363.1	1387.5	1393.3
30°	1285.4	1301.2	1324.2	1348.7	1354.4
32.5°	1238.0	1253.8	1281.1	1307.0	1314.2
35°	1189.1	1203.5	1232.2	1262.4	1271.0
37.5°	1133.0	1151.7	1183.3	1213.5	1222.2
40°	1074.1	1097.1	1133.0	1164.6	1174.7
42.5°	1018.0	1042.4	1078.4	1112.9	1124.4
45°	959.0	982.0	1025.2	1064.0	1072.6
47.5°	898.6	924.5	970.5	1009.4	1023.7
50°	838.3	865.6	914.5	954.7	963.3
52.5°	777.9	806.6	858.4	901.5	905.8
55°	714.6	746.2	800.9	842.6	851.2
57.5°	657.1	684.4	743.4	786.5	796.6
60°	593.8	624.0	687.3	727.5	740.5
62.5°	533.4	565.1	631.2	671.5	683.0
65°	470.2	506.1	570.8	618.3	629.8
67.5°	415.5	450.0	519.1	565.1	576.6
70°	352.3	391.1	464.4	511.9	523.4
72.5°	297.6	337.9	411.2	457.2	474.5
75°	238.7	284.7	358.0	406.9	418.4
77.5°	181.2	234.4	309.1	346.5	346.5
80°	129.4	185.5	254.5	271.8	274.6
82.5°	84.8	139.5	188.4	186.9	186.9
85°	48.9	90.6	112.2	109.3	109.3
87.5°	18.7	37.4	40.3	40.3	38.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)