

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: P276410

Luminaire Tested: **24CZ2-50HE-S-UNV-L93050-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: P276410
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-L93050-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: 4666.1 lumens
Efficiency: N/A
Efficacy: 125.4 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

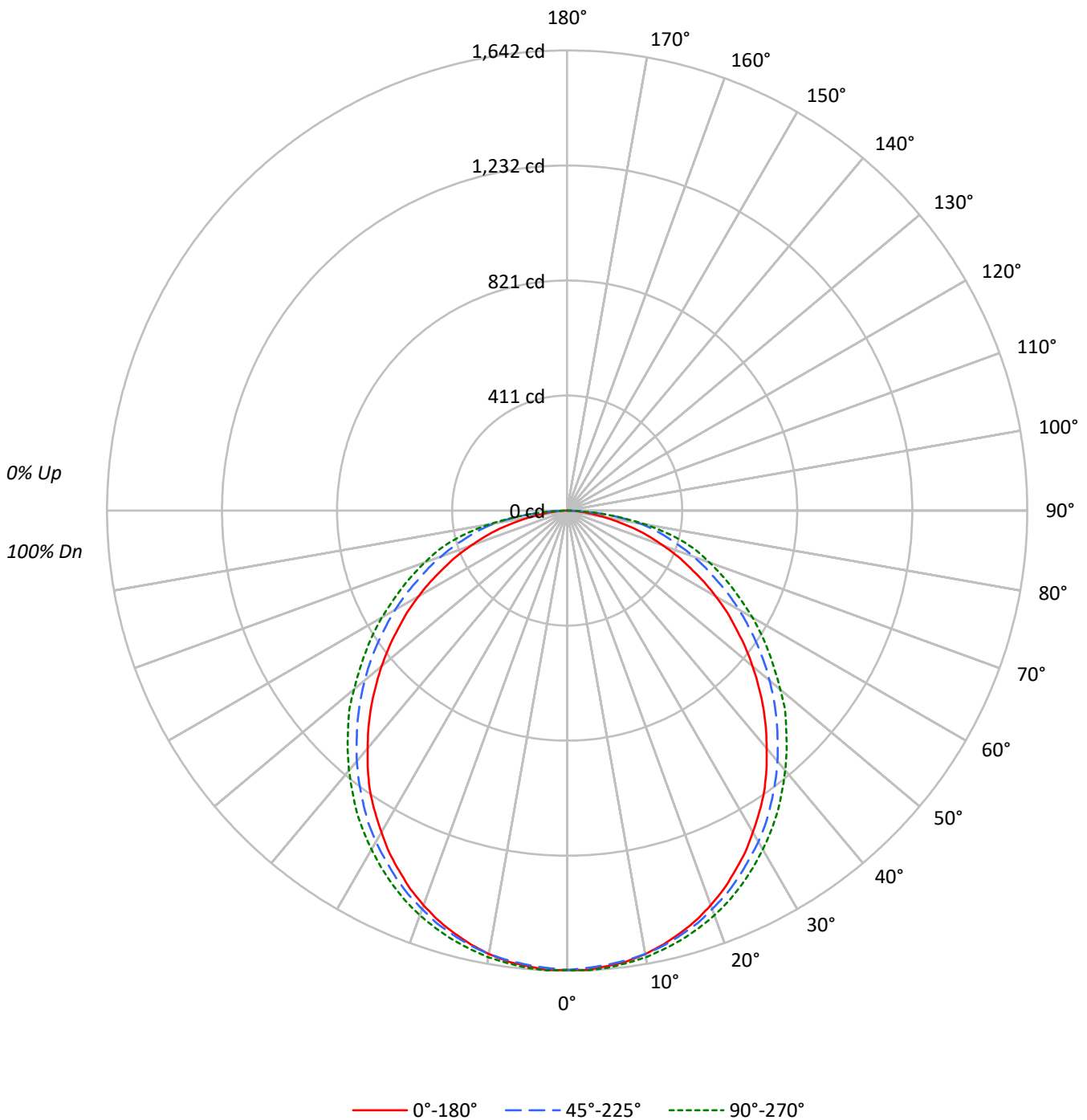
Input Watts (W): 37.211904
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P276410

CATALOG NUMBER: 24CZ2-50HE-S-UNV-L93050-W2A1-U-4500K

Luminous Intensity Polar Plot





TEST NUMBER: P276410

CATALOG NUMBER: 24CZ2-50HE-S-UNV-L93050-W2A1-U-4500K

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°	2206	2206	2206
5°	2204	2198	2212
10°	2195	2195	2211
15°	2174	2184	2207
20°	2145	2167	2201
25°	2106	2145	2187
30°	2059	2121	2169
35°	2013	2086	2152
40°	1945	2051	2127
45°	1881	2011	2104
50°	1809	1973	2079
55°	1728	1936	2058
60°	1647	1907	2054
65°	1543	1873	2067
70°	1428	1883	2122
75°	1279	1918	2242
80°	1034	2032	2194
85°	778	1785	1738



TEST NUMBER: P276410

CATALOG NUMBER: 24CZ2-50HE-S-UNV-L93050-W2A1-U-4500K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	155.2	3.3
10°-20°	443.4	9.5
20°-30°	666.6	14.3
30°-40°	794.0	17.0
40°-50°	812.6	17.4
50°-60°	731.6	15.7
60°-70°	574.5	12.3
70°-80°	372.9	8.0
80°-90°	115.3	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°	1265.2	27.1
0°-40°	2059.2	44.1
0°-60°	3603.4	77.2
0°-90°	4666.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4666.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1639	1639	1639	1639	1639	
5°	1632	1635	1627	1636	1638	155
15°	1561	1565	1568	1581	1584	440
25°	1418	1430	1445	1469	1473	653
35°	1226	1240	1270	1301	1310	765
45°	989	1012	1057	1097	1106	762
55°	737	769	826	868	877	660
65°	485	522	588	637	649	482
75°	246	294	369	419	431	260
85°	50	93	116	113	113	61
90°	0	0	0	0	0	



TEST NUMBER: P276410

CATALOG NUMBER: 24CZ2-50HE-S-UNV-L93050-W2A1-U-4500K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1639.2	1639.2	1639.2	1639.2	1639.2
2.5°	1640.7	1640.7	1633.3	1640.7	1642.2
5°	1631.8	1634.8	1627.4	1636.3	1637.7
7.5°	1622.9	1622.9	1618.5	1627.4	1628.9
10°	1606.6	1608.1	1606.6	1617.0	1618.5
12.5°	1585.9	1588.8	1590.3	1600.7	1602.2
15°	1560.7	1565.1	1568.1	1581.4	1584.4
17.5°	1532.5	1537.0	1544.4	1559.2	1562.2
20°	1498.4	1504.4	1513.2	1532.5	1537.0
22.5°	1461.4	1467.3	1482.1	1499.9	1507.3
25°	1418.4	1430.2	1445.1	1468.8	1473.2
27.5°	1375.4	1385.8	1405.1	1430.2	1436.2
30°	1325.0	1341.3	1365.0	1390.2	1396.2
32.5°	1276.1	1292.4	1320.6	1347.3	1354.7
35°	1225.7	1240.5	1270.2	1301.3	1310.2
37.5°	1167.9	1187.2	1219.8	1250.9	1259.8
40°	1107.1	1130.9	1167.9	1200.5	1210.9
42.5°	1049.3	1074.5	1111.6	1147.2	1159.0
45°	988.6	1012.3	1056.8	1096.8	1105.7
47.5°	926.3	953.0	1000.4	1040.5	1055.3
50°	864.1	892.2	942.6	984.1	993.0
52.5°	801.8	831.5	884.8	929.3	933.7
55°	736.6	769.2	825.5	868.5	877.4
57.5°	677.3	705.5	766.3	810.7	821.1
60°	612.1	643.2	708.5	750.0	763.3
62.5°	549.9	582.5	650.7	692.2	704.0
65°	484.7	521.7	588.4	637.3	649.2
67.5°	428.3	463.9	535.0	582.5	594.3
70°	363.1	403.1	478.7	527.6	539.5
72.5°	306.8	348.3	423.9	471.3	489.1
75°	246.0	293.5	369.0	419.4	431.3
77.5°	186.7	241.6	318.7	357.2	357.2
80°	133.4	191.2	262.3	280.1	283.1
82.5°	87.4	143.8	194.2	192.7	192.7
85°	50.4	93.4	115.6	112.6	112.6
87.5°	19.3	38.5	41.5	41.5	40.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)