

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: P276424

Luminaire Tested: **24CZ2-65HE-S-UNV-L93050-W2A1-U-4000K**

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: P276424
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: 24CZ2-65HE-S-UNV-L93050-W2A1-U-4000K
Description: CRUZE 2.0 2x4 TUNABLE WHITE LED TROFFER WITH SMOOTH LENS
Light Source: (336) 90 CRI LEDS TUNED TO 4000K CCT
Ballast/Driver: ELECTRONIC DRIVER
Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5964.0 lumens
Efficiency: N/A
Efficacy: 118.8 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

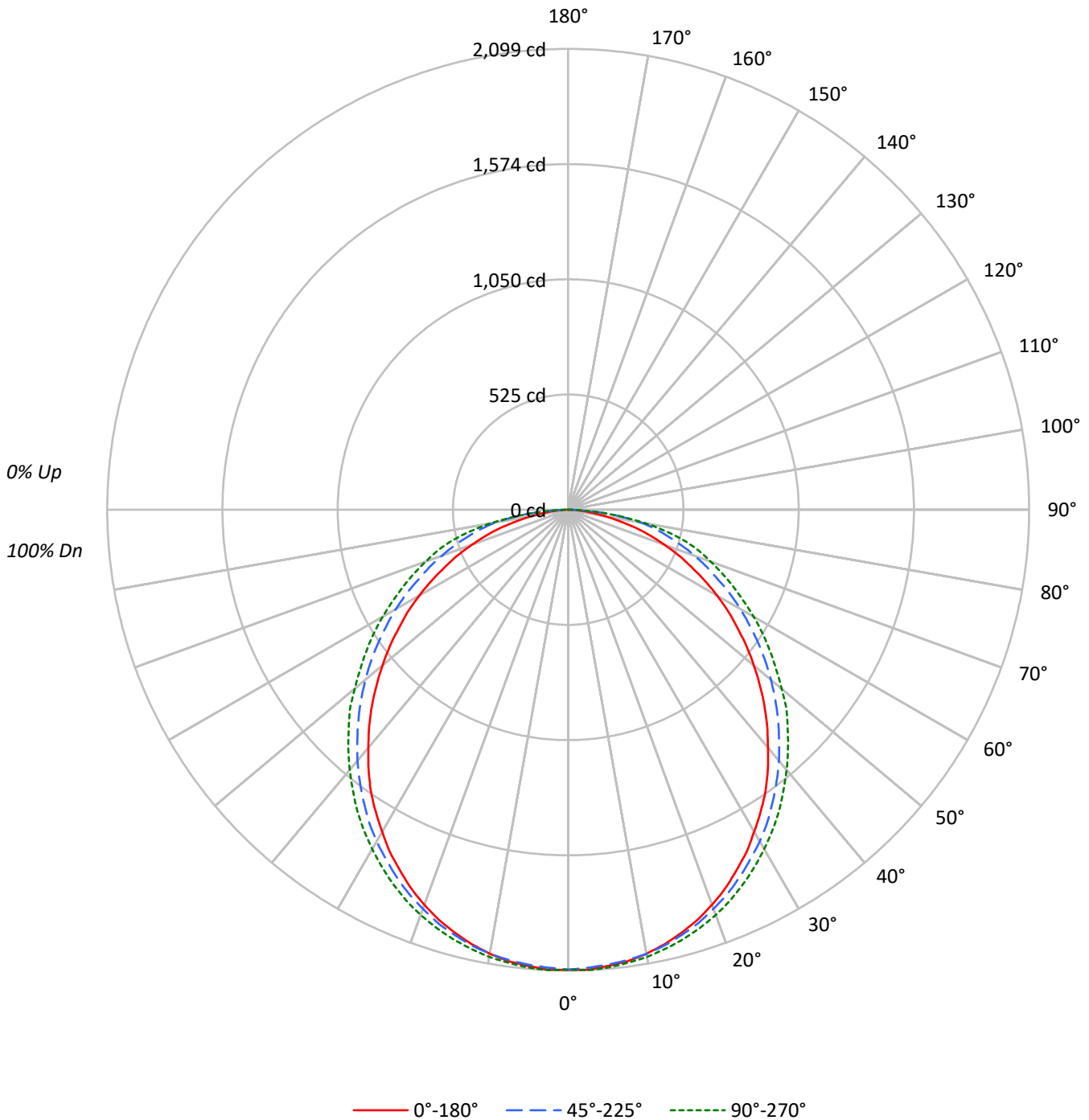
Input Watts (W): 50.189868
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2819	2819	2819
5°	2817	2809	2827
10°	2806	2806	2826
15°	2779	2792	2821
20°	2742	2769	2813
25°	2691	2742	2795
30°	2631	2711	2772
35°	2573	2667	2751
40°	2485	2622	2718
45°	2404	2570	2689
50°	2312	2522	2657
55°	2209	2475	2631
60°	2105	2437	2625
65°	1972	2394	2642
70°	1826	2407	2713
75°	1635	2452	2866
80°	1321	2598	2803
85°	994	2282	2223



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	198.4	3.3
10°-20°	566.8	9.5
20°-30°	852.0	14.3
30°-40°	1014.8	17.0
40°-50°	1038.6	17.4
50°-60°	935.1	15.7
60°-70°	734.3	12.3
70°-80°	476.6	8.0
80°-90°	147.4	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°	1617.1	27.1
0°-40°	2631.9	44.1
0°-60°	4605.7	77.2
0°-90°	5964.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5964.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2095	2095	2095	2095	2095	
5°	2086	2090	2080	2091	2093	198
15°	1995	2000	2004	2021	2025	562
25°	1813	1828	1847	1877	1883	835
35°	1567	1586	1624	1663	1675	977
45°	1264	1294	1351	1402	1413	974
55°	942	983	1055	1110	1122	844
65°	620	667	752	815	830	617
75°	314	375	472	536	551	333
85°	64	119	148	144	144	78
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2095.2	2095.2	2095.2	2095.2	2095.2
2.5°	2097.1	2097.1	2087.6	2097.1	2099.0
5°	2085.7	2089.5	2080.0	2091.4	2093.3
7.5°	2074.4	2074.4	2068.7	2080.0	2081.9
10°	2053.5	2055.4	2053.5	2066.8	2068.7
12.5°	2027.0	2030.8	2032.7	2045.9	2047.8
15°	1994.8	2000.5	2004.3	2021.3	2025.1
17.5°	1958.8	1964.5	1974.0	1992.9	1996.7
20°	1915.2	1922.8	1934.2	1958.8	1964.5
22.5°	1867.9	1875.4	1894.4	1917.1	1926.6
25°	1812.9	1828.1	1847.0	1877.3	1883.0
27.5°	1758.0	1771.3	1795.9	1828.1	1835.7
30°	1693.6	1714.4	1744.7	1776.9	1784.5
32.5°	1631.1	1651.9	1687.9	1722.0	1731.5
35°	1566.7	1585.6	1623.5	1663.3	1674.6
37.5°	1492.8	1517.4	1559.1	1598.9	1610.2
40°	1415.1	1445.4	1492.8	1534.5	1547.7
42.5°	1341.2	1373.4	1420.8	1466.3	1481.4
45°	1263.6	1293.9	1350.7	1401.8	1413.2
47.5°	1184.0	1218.1	1278.7	1329.9	1348.8
50°	1104.4	1140.4	1204.8	1257.9	1269.2
52.5°	1024.9	1062.8	1131.0	1187.8	1193.5
55°	941.5	983.2	1055.2	1110.1	1121.5
57.5°	865.7	901.7	979.4	1036.2	1049.5
60°	782.4	822.2	905.5	958.6	975.6
62.5°	702.8	744.5	831.6	884.7	899.8
65°	619.5	666.8	752.1	814.6	829.7
67.5°	547.5	592.9	683.9	744.5	759.7
70°	464.1	515.3	611.9	674.4	689.6
72.5°	392.1	445.2	541.8	602.4	625.1
75°	314.5	375.1	471.7	536.1	551.3
77.5°	238.7	308.8	407.3	456.5	456.5
80°	170.5	244.4	335.3	358.0	361.8
82.5°	111.8	183.8	248.2	246.3	246.3
85°	64.4	119.3	147.8	144.0	144.0
87.5°	24.6	49.3	53.0	53.0	51.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)