

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: P276425

Luminaire Tested: **24CZ2-65HE-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: P276425
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-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: 6068.0 lumens
Efficiency: N/A
Efficacy: 119.0 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

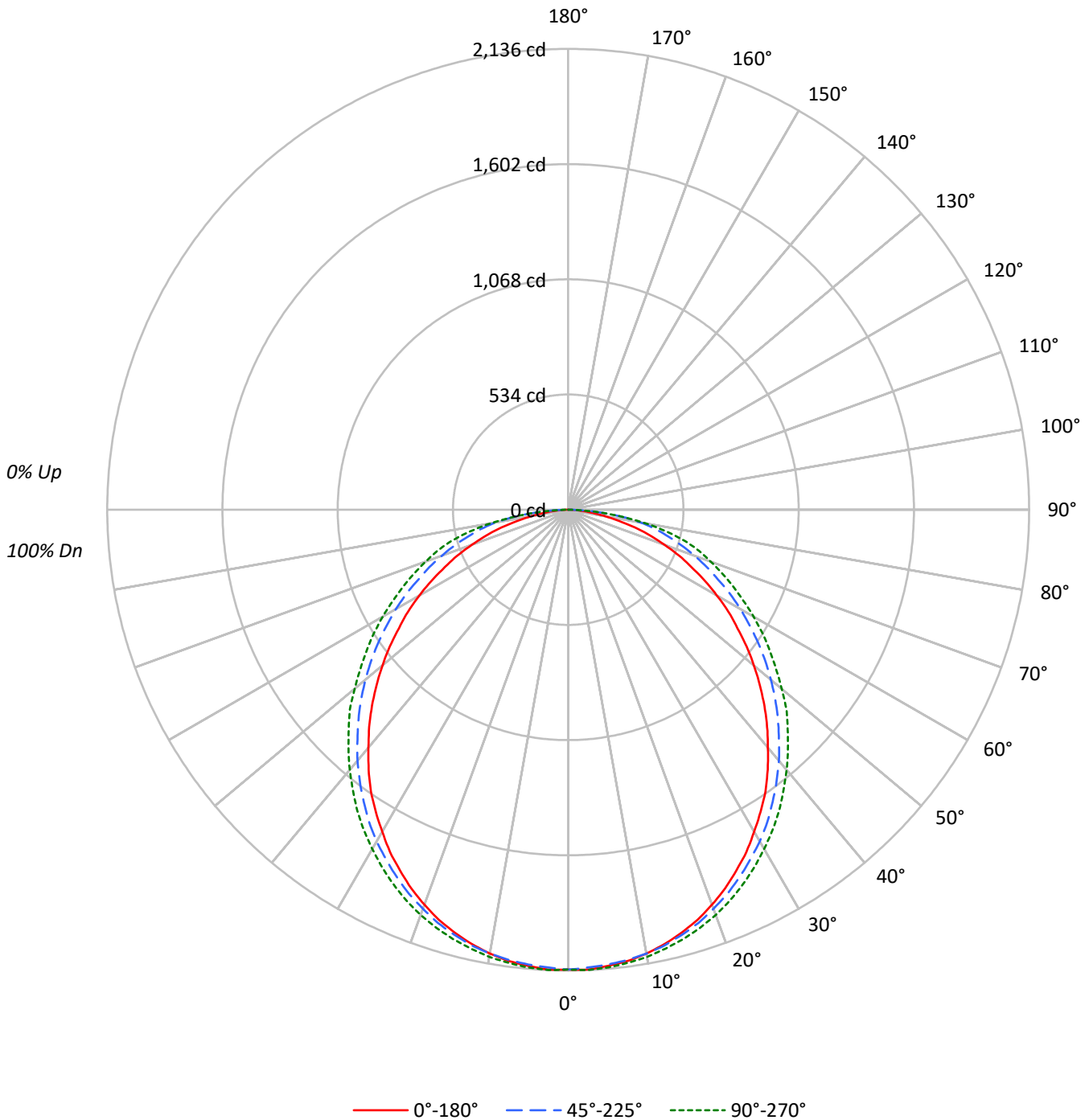
Input Watts (W): 50.972556
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2868	2868	2868
5°	2866	2858	2877
10°	2854	2854	2876
15°	2827	2841	2870
20°	2790	2818	2862
25°	2738	2790	2844
30°	2677	2758	2821
35°	2618	2713	2799
40°	2529	2668	2766
45°	2446	2615	2736
50°	2352	2566	2703
55°	2247	2518	2677
60°	2142	2479	2671
65°	2007	2436	2688
70°	1858	2449	2760
75°	1663	2495	2916
80°	1344	2644	2852
85°	1011	2320	2262



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	201.8	3.3
10°-20°	576.6	9.5
20°-30°	866.8	14.3
30°-40°	1032.5	17.0
40°-50°	1056.7	17.4
50°-60°	951.4	15.7
60°-70°	747.1	12.3
70°-80°	484.9	8.0
80°-90°	150.0	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°	1645.3	27.1
0°-40°	2677.8	44.1
0°-60°	4685.9	77.2
0°-90°	6068.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6068.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2132	2132	2132	2132	2132	
5°	2122	2126	2116	2128	2130	202
15°	2030	2035	2039	2056	2060	572
25°	1844	1860	1879	1910	1916	850
35°	1594	1613	1652	1692	1704	994
45°	1286	1316	1374	1426	1438	991
55°	958	1000	1074	1130	1141	859
65°	630	678	765	829	844	627
75°	320	382	480	546	561	339
85°	66	121	150	146	146	79
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2131.7	2131.7	2131.7	2131.7	2131.7
2.5°	2133.6	2133.6	2124.0	2133.6	2135.6
5°	2122.1	2125.9	2116.3	2127.9	2129.8
7.5°	2110.5	2110.5	2104.7	2116.3	2118.2
10°	2089.3	2091.2	2089.3	2102.8	2104.7
12.5°	2062.3	2066.2	2068.1	2081.6	2083.5
15°	2029.6	2035.3	2039.2	2056.5	2060.4
17.5°	1992.9	1998.7	2008.4	2027.6	2031.5
20°	1948.6	1956.3	1967.9	1992.9	1998.7
22.5°	1900.4	1908.1	1927.4	1950.5	1960.2
25°	1844.5	1859.9	1879.2	1910.1	1915.8
27.5°	1788.6	1802.1	1827.2	1859.9	1867.7
30°	1723.1	1744.3	1775.1	1807.9	1815.6
32.5°	1659.5	1680.7	1717.3	1752.0	1761.7
35°	1594.0	1613.2	1651.8	1692.3	1703.8
37.5°	1518.8	1543.9	1586.3	1626.7	1638.3
40°	1439.8	1470.6	1518.8	1561.2	1574.7
42.5°	1364.6	1397.4	1445.6	1491.8	1507.2
45°	1285.6	1316.4	1374.2	1426.3	1437.8
47.5°	1204.6	1239.3	1301.0	1353.0	1372.3
50°	1123.7	1160.3	1225.8	1279.8	1291.4
52.5°	1042.7	1081.3	1150.7	1208.5	1214.3
55°	957.9	1000.3	1073.6	1129.5	1141.0
57.5°	880.8	917.4	996.5	1054.3	1067.8
60°	796.0	836.5	921.3	975.3	992.6
62.5°	715.1	757.5	846.1	900.1	915.5
65°	630.3	678.4	765.2	828.8	844.2
67.5°	557.0	603.3	695.8	757.5	772.9
70°	472.2	524.3	622.6	686.2	701.6
72.5°	399.0	452.9	551.2	612.9	636.0
75°	319.9	381.6	479.9	545.5	560.9
77.5°	242.9	314.2	414.4	464.5	464.5
80°	173.5	248.6	341.2	364.3	368.1
82.5°	113.7	187.0	252.5	250.6	250.6
85°	65.5	121.4	150.3	146.5	146.5
87.5°	25.1	50.1	54.0	54.0	52.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)