

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: P276656

Luminaire Tested: **24CZ2-60HE-S-UNV-L92765-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: P276656
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: 24CZ2-60HE-S-UNV-L92765-W2A1-U-5000K
Description: CRUZE 2.0 2x4 TUNABLE WHITE LED TROFFER
WITH SMOOTH LENS
Light Source: (336) 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: 5542.5 lumens
Efficiency: N/A
Efficacy: 122.4 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

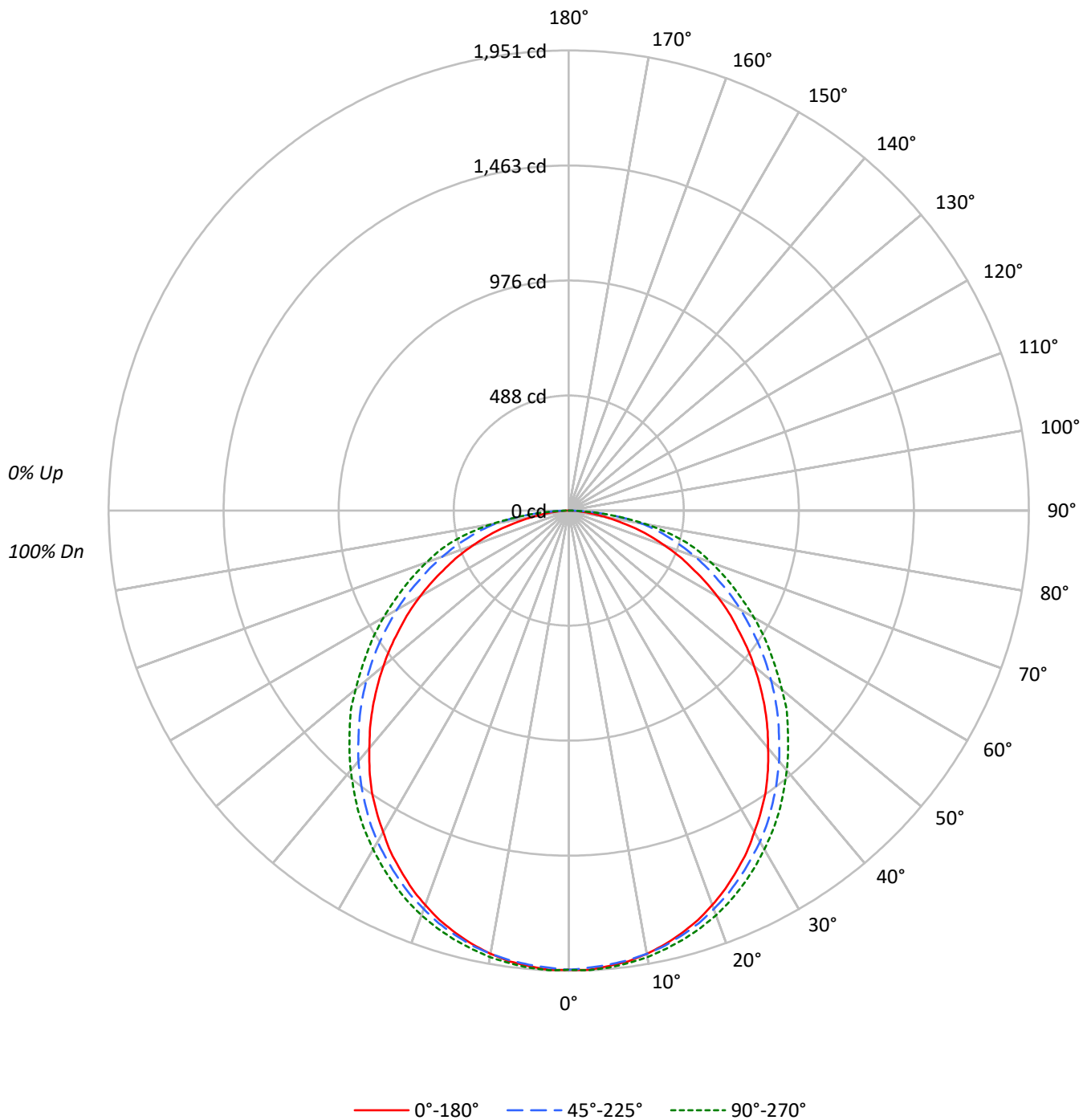
Input Watts (W): 45.291
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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					0
RW	70	50	30	10	70	50	30	10		50	30	10		50	30	10		50	30	10
RCR																				
0	119	119	119	119	116	116	116	116		111	111	111		106	106	106		102	102	102
1	108	103	99	95	106	101	97	93		97	93	90		93	90	88		89	87	85
2	98	90	83	77	96	88	81	76		84	79	74		81	76	72		78	74	71
3	89	79	70	64	87	77	69	63		74	67	62		71	66	61		69	64	60
4	82	70	61	54	80	68	60	54		66	59	53		63	57	52		61	56	51
5	75	62	53	46	73	61	53	46		59	51	46		57	50	45		55	49	45
6	70	56	47	40	68	55	47	40		53	46	40		52	45	40		50	44	39
7	64	51	42	36	63	50	42	36		48	41	35		47	40	35		46	39	35
8	60	46	38	32	58	46	37	32		44	37	32		43	36	31		42	36	31
9	56	43	34	29	55	42	34	29		41	34	28		40	33	28		39	33	28
10	53	39	31	26	51	39	31	26		38	31	26		37	30	26		36	30	26

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2620	2620	2620
5°	2618	2611	2628
10°	2607	2607	2627
15°	2582	2595	2622
20°	2549	2574	2614
25°	2501	2548	2598
30°	2445	2519	2577
35°	2391	2478	2556
40°	2310	2437	2526
45°	2234	2388	2499
50°	2148	2344	2469
55°	2053	2300	2445
60°	1957	2264	2440
65°	1833	2225	2455
70°	1697	2237	2521
75°	1519	2279	2663
80°	1227	2414	2606
85°	925	2120	2066



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	184.3	3.3
10°-20°	526.7	9.5
20°-30°	791.8	14.3
30°-40°	943.1	17.0
40°-50°	965.2	17.4
50°-60°	869.0	15.7
60°-70°	682.4	12.3
70°-80°	442.9	8.0
80°-90°	137.0	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°	1502.8	27.1
0°-40°	2445.9	44.1
0°-60°	4280.2	77.2
0°-90°	5542.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5542.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1947	1947	1947	1947	1947	
5°	1938	1942	1933	1944	1945	184
15°	1854	1859	1863	1878	1882	523
25°	1685	1699	1716	1745	1750	776
35°	1456	1474	1509	1546	1556	908
45°	1174	1202	1255	1303	1313	905
55°	875	914	981	1032	1042	784
65°	576	620	699	757	771	573
75°	292	349	438	498	512	309
85°	60	111	137	134	134	72
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1947.1	1947.1	1947.1	1947.1	1947.1
2.5°	1948.9	1948.9	1940.1	1948.9	1950.6
5°	1938.3	1941.8	1933.0	1943.6	1945.4
7.5°	1927.8	1927.8	1922.5	1933.0	1934.8
10°	1908.4	1910.2	1908.4	1920.7	1922.5
12.5°	1883.7	1887.3	1889.0	1901.3	1903.1
15°	1853.8	1859.1	1862.6	1878.5	1882.0
17.5°	1820.4	1825.6	1834.4	1852.1	1855.6
20°	1779.9	1786.9	1797.5	1820.4	1825.6
22.5°	1735.9	1742.9	1760.5	1781.6	1790.4
25°	1684.8	1698.9	1716.5	1744.7	1749.9
27.5°	1633.8	1646.1	1669.0	1698.9	1705.9
30°	1573.9	1593.3	1621.4	1651.4	1658.4
32.5°	1515.8	1535.2	1568.6	1600.3	1609.1
35°	1455.9	1473.5	1508.8	1545.7	1556.3
37.5°	1387.3	1410.2	1448.9	1485.9	1496.4
40°	1315.1	1343.3	1387.3	1426.0	1438.3
42.5°	1246.4	1276.4	1320.4	1362.6	1376.7
45°	1174.3	1202.4	1255.2	1302.8	1313.3
47.5°	1100.3	1132.0	1188.3	1235.9	1253.5
50°	1026.4	1059.8	1119.7	1169.0	1179.5
52.5°	952.4	987.6	1051.0	1103.8	1109.1
55°	875.0	913.7	980.6	1031.7	1042.2
57.5°	804.6	838.0	910.2	963.0	975.3
60°	727.1	764.1	841.5	890.8	906.7
62.5°	653.1	691.9	772.9	822.2	836.2
65°	575.7	619.7	698.9	757.0	771.1
67.5°	508.8	551.0	635.5	691.9	706.0
70°	431.3	478.9	568.6	626.7	640.8
72.5°	364.4	413.7	503.5	559.8	581.0
75°	292.2	348.6	438.4	498.2	512.3
77.5°	221.8	287.0	378.5	424.3	424.3
80°	158.4	227.1	311.6	332.7	336.3
82.5°	103.9	170.8	230.6	228.9	228.9
85°	59.9	110.9	137.3	133.8	133.8
87.5°	22.9	45.8	49.3	49.3	47.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)