

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: P276669

Luminaire Tested: **24CZ2-70HE-S-UNV-L92765-W2A1-U-2700K**

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: P276669
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: 24CZ2-70HE-S-UNV-L92765-W2A1-U-2700K
Description: CRUZE 2.0 2x4 TUNABLE WHITE LED TROFFER WITH SMOOTH LENS
Light Source: (336) 90 CRI LEDS TUNED TO 2700K CCT
Ballast/Driver: ELECTRONIC DRIVER
Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5491.8 lumens
Efficiency: N/A
Efficacy: 102.5 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

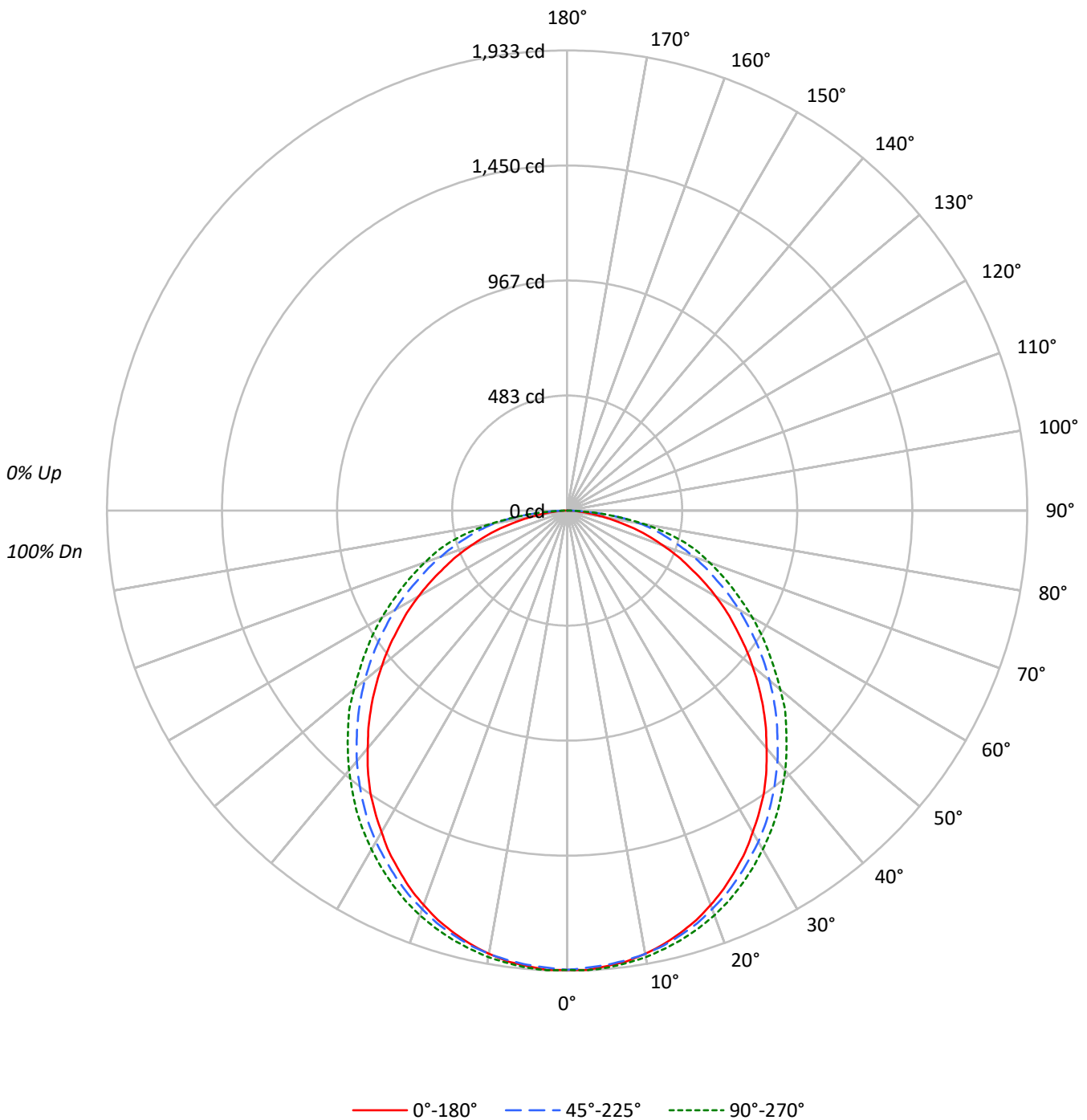
Input Watts (W): 53.568
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2596	2596	2596
5°	2594	2587	2603
10°	2583	2583	2603
15°	2559	2571	2598
20°	2525	2550	2590
25°	2478	2525	2574
30°	2423	2496	2553
35°	2370	2456	2533
40°	2289	2414	2503
45°	2214	2367	2476
50°	2129	2322	2447
55°	2034	2279	2422
60°	1939	2244	2418
65°	1816	2205	2432
70°	1681	2216	2498
75°	1506	2258	2639
80°	1216	2393	2582
85°	915	2101	2047



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	182.6	3.3
10°-20°	521.9	9.5
20°-30°	784.5	14.3
30°-40°	934.5	17.0
40°-50°	956.4	17.4
50°-60°	861.0	15.7
60°-70°	676.2	12.3
70°-80°	438.9	8.0
80°-90°	135.7	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°	1489.1	27.1
0°-40°	2423.6	44.1
0°-60°	4241.0	77.2
0°-90°	5491.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5491.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1929	1929	1929	1929	1929	
5°	1921	1924	1915	1926	1928	182
15°	1837	1842	1846	1861	1865	518
25°	1669	1683	1701	1729	1734	769
35°	1443	1460	1495	1532	1542	900
45°	1164	1191	1244	1291	1301	897
55°	867	905	972	1022	1033	777
65°	570	614	692	750	764	568
75°	290	345	434	494	508	306
85°	59	110	136	133	133	72
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1929.3	1929.3	1929.3	1929.3	1929.3
2.5°	1931.1	1931.1	1922.3	1931.1	1932.8
5°	1920.6	1924.1	1915.4	1925.8	1927.6
7.5°	1910.1	1910.1	1904.9	1915.4	1917.1
10°	1890.9	1892.7	1890.9	1903.1	1904.9
12.5°	1866.5	1870.0	1871.7	1884.0	1885.7
15°	1836.9	1842.1	1845.6	1861.3	1864.8
17.5°	1803.7	1808.9	1817.7	1835.1	1838.6
20°	1763.6	1770.6	1781.0	1803.7	1808.9
22.5°	1720.0	1727.0	1744.4	1765.3	1774.1
25°	1669.4	1683.4	1700.8	1728.7	1733.9
27.5°	1618.8	1631.0	1653.7	1683.4	1690.3
30°	1559.5	1578.7	1606.6	1636.3	1643.2
32.5°	1501.9	1521.1	1554.3	1585.7	1594.4
35°	1442.6	1460.1	1495.0	1531.6	1542.1
37.5°	1374.6	1397.3	1435.6	1472.3	1482.7
40°	1303.1	1331.0	1374.6	1413.0	1425.2
42.5°	1235.0	1264.7	1308.3	1350.2	1364.1
45°	1163.5	1191.4	1243.8	1290.9	1301.3
47.5°	1090.3	1121.7	1177.5	1224.6	1242.0
50°	1017.0	1050.1	1109.4	1158.3	1168.8
52.5°	943.7	978.6	1041.4	1093.7	1099.0
55°	867.0	905.3	971.6	1022.2	1032.7
57.5°	797.2	830.3	901.9	954.2	966.4
60°	720.4	757.1	833.8	882.7	898.4
62.5°	647.2	685.6	765.8	814.6	828.6
65°	570.4	614.0	692.5	750.1	764.0
67.5°	504.1	546.0	629.7	685.6	699.5
70°	427.4	474.5	563.4	621.0	635.0
72.5°	361.1	409.9	498.9	554.7	575.7
75°	289.6	345.4	434.4	493.7	507.6
77.5°	219.8	284.3	375.0	420.4	420.4
80°	157.0	225.0	308.8	329.7	333.2
82.5°	102.9	169.2	228.5	226.8	226.8
85°	59.3	109.9	136.1	132.6	132.6
87.5°	22.7	45.4	48.8	48.8	47.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)