

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: P276427

Luminaire Tested: **24CZ2-70HE-S-UNV-L93050-W2A1-U-3000K**

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: P276427
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-L93050-W2A1-U-3000K
Description: CRUZE 2.0 2x4 TUNABLE WHITE LED TROFFER WITH SMOOTH LENS
Light Source: (336) 90 CRI LEDS TUNED TO 3000K CCT
Ballast/Driver: ELECTRONIC DRIVER
Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5452.7 lumens
Efficiency: N/A
Efficacy: 99.3 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

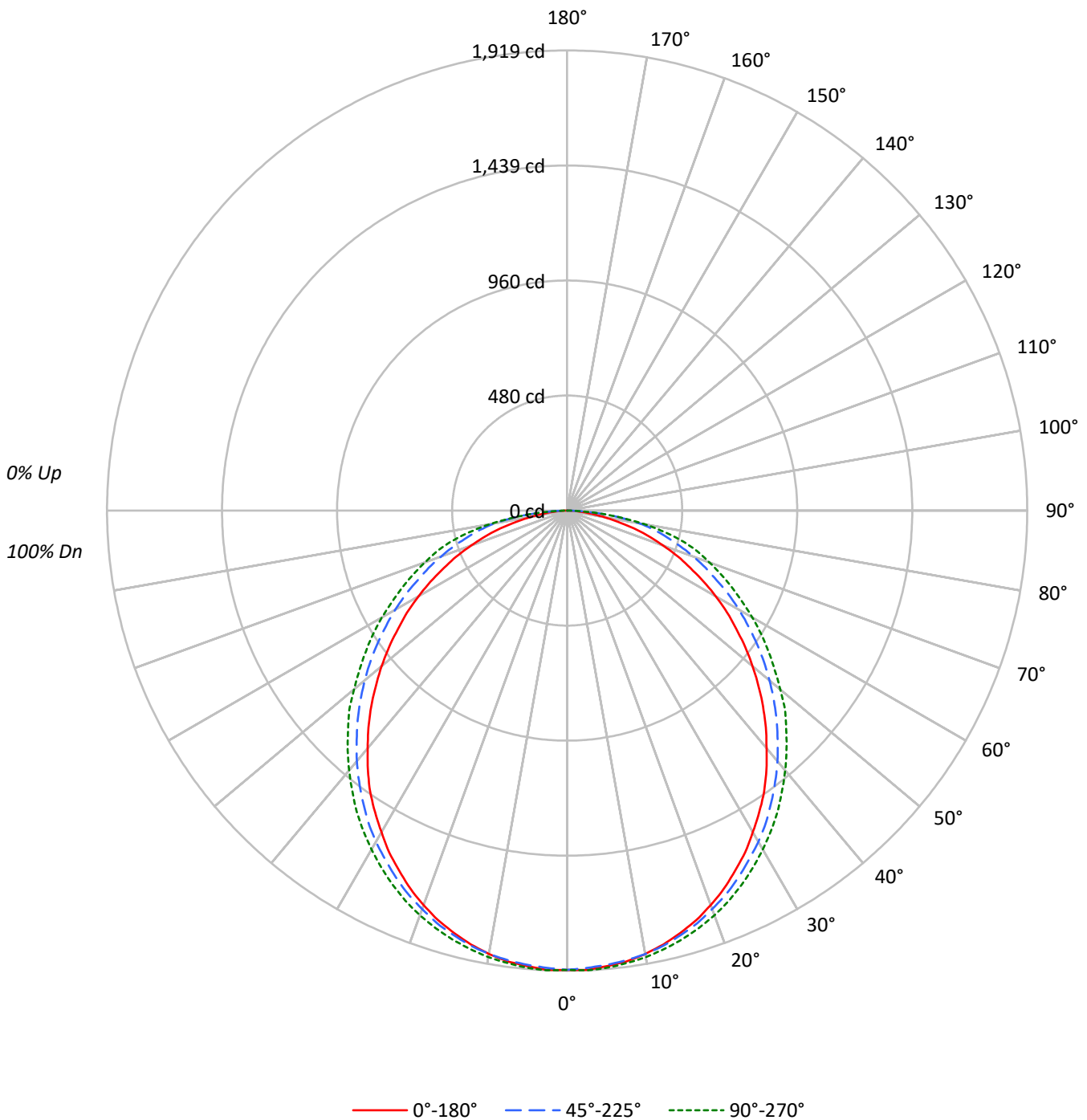
Input Watts (W): 54.895203
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P276427

CATALOG NUMBER: 24CZ2-70HE-S-UNV-L93050-W2A1-U-3000K

Luminous Intensity Polar Plot





TEST NUMBER: P276427

CATALOG NUMBER: 24CZ2-70HE-S-UNV-L93050-W2A1-U-3000K

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°	2577	2577	2577
5°	2576	2568	2585
10°	2565	2565	2584
15°	2540	2552	2579
20°	2507	2532	2572
25°	2461	2507	2556
30°	2406	2478	2535
35°	2353	2438	2515
40°	2272	2397	2485
45°	2198	2350	2459
50°	2114	2306	2429
55°	2019	2263	2405
60°	1925	2228	2400
65°	1803	2189	2415
70°	1669	2201	2480
75°	1495	2242	2620
80°	1208	2376	2563
85°	909	2086	2032



TEST NUMBER: P276427

CATALOG NUMBER: 24CZ2-70HE-S-UNV-L93050-W2A1-U-3000K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	181.3	3.3
10°-20°	518.2	9.5
20°-30°	778.9	14.3
30°-40°	927.8	17.0
40°-50°	949.6	17.4
50°-60°	854.9	15.7
60°-70°	671.4	12.3
70°-80°	435.7	8.0
80°-90°	134.8	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°	1478.5	27.1
0°-40°	2406.3	44.1
0°-60°	4210.8	77.2
0°-90°	5452.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5452.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1916	1916	1916	1916	1916	
5°	1907	1910	1902	1912	1914	181
15°	1824	1829	1832	1848	1852	514
25°	1658	1671	1689	1716	1722	764
35°	1432	1450	1484	1521	1531	894
45°	1155	1183	1235	1282	1292	891
55°	861	899	965	1015	1025	772
65°	566	610	688	745	759	564
75°	288	343	431	490	504	304
85°	59	109	135	132	132	71
90°	0	0	0	0	0	



TEST NUMBER: P276427

CATALOG NUMBER: 24CZ2-70HE-S-UNV-L93050-W2A1-U-3000K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1915.6	1915.6	1915.6	1915.6	1915.6
2.5°	1917.3	1917.3	1908.7	1917.3	1919.0
5°	1906.9	1910.4	1901.7	1912.1	1913.8
7.5°	1896.5	1896.5	1891.3	1901.7	1903.5
10°	1877.5	1879.2	1877.5	1889.6	1891.3
12.5°	1853.2	1856.7	1858.4	1870.5	1872.3
15°	1823.8	1829.0	1832.4	1848.0	1851.5
17.5°	1790.9	1796.1	1804.7	1822.1	1825.5
20°	1751.0	1758.0	1768.4	1790.9	1796.1
22.5°	1707.7	1714.7	1732.0	1752.8	1761.4
25°	1657.5	1671.4	1688.7	1716.4	1721.6
27.5°	1607.3	1619.4	1641.9	1671.4	1678.3
30°	1548.4	1567.5	1595.2	1624.6	1631.5
32.5°	1491.2	1510.3	1543.2	1574.4	1583.0
35°	1432.4	1449.7	1484.3	1520.7	1531.1
37.5°	1364.8	1387.3	1425.4	1461.8	1472.2
40°	1293.8	1321.5	1364.8	1402.9	1415.0
42.5°	1226.2	1255.7	1299.0	1340.6	1354.4
45°	1155.2	1182.9	1234.9	1281.7	1292.1
47.5°	1082.5	1113.7	1169.1	1215.9	1233.2
50°	1009.8	1042.7	1101.5	1150.0	1160.4
52.5°	937.0	971.6	1034.0	1086.0	1091.2
55°	860.8	898.9	964.7	1014.9	1025.3
57.5°	791.5	824.4	895.4	947.4	959.5
60°	715.3	751.7	827.9	876.4	892.0
62.5°	642.6	680.7	760.3	808.8	822.7
65°	566.4	609.7	687.6	744.8	758.6
67.5°	500.5	542.1	625.2	680.7	694.5
70°	424.3	471.1	559.4	616.6	630.4
72.5°	358.5	407.0	495.3	550.8	571.6
75°	287.5	342.9	431.3	490.2	504.0
77.5°	218.2	282.3	372.4	417.4	417.4
80°	155.9	223.4	306.6	327.3	330.8
82.5°	102.2	168.0	226.9	225.2	225.2
85°	58.9	109.1	135.1	131.6	131.6
87.5°	22.5	45.0	48.5	48.5	46.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)