

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: P276657

Luminaire Tested: **24CZ2-60HE-S-UNV-L92765-W2A1-U-5500K**

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: P276657  
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-5500K  
Description: CRUZE 2.0 2x4 TUNABLE WHITE LED TROFFER WITH SMOOTH LENS  
Light Source: (336) 90 CRI LEDS TUNED TO 5500K CCT  
Ballast/Driver: ELECTRONIC DRIVER  
Luminaire Equipment: Sample No.   Condition   Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5628.0 lumens  
Efficiency: N/A  
Efficacy: 123.8 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

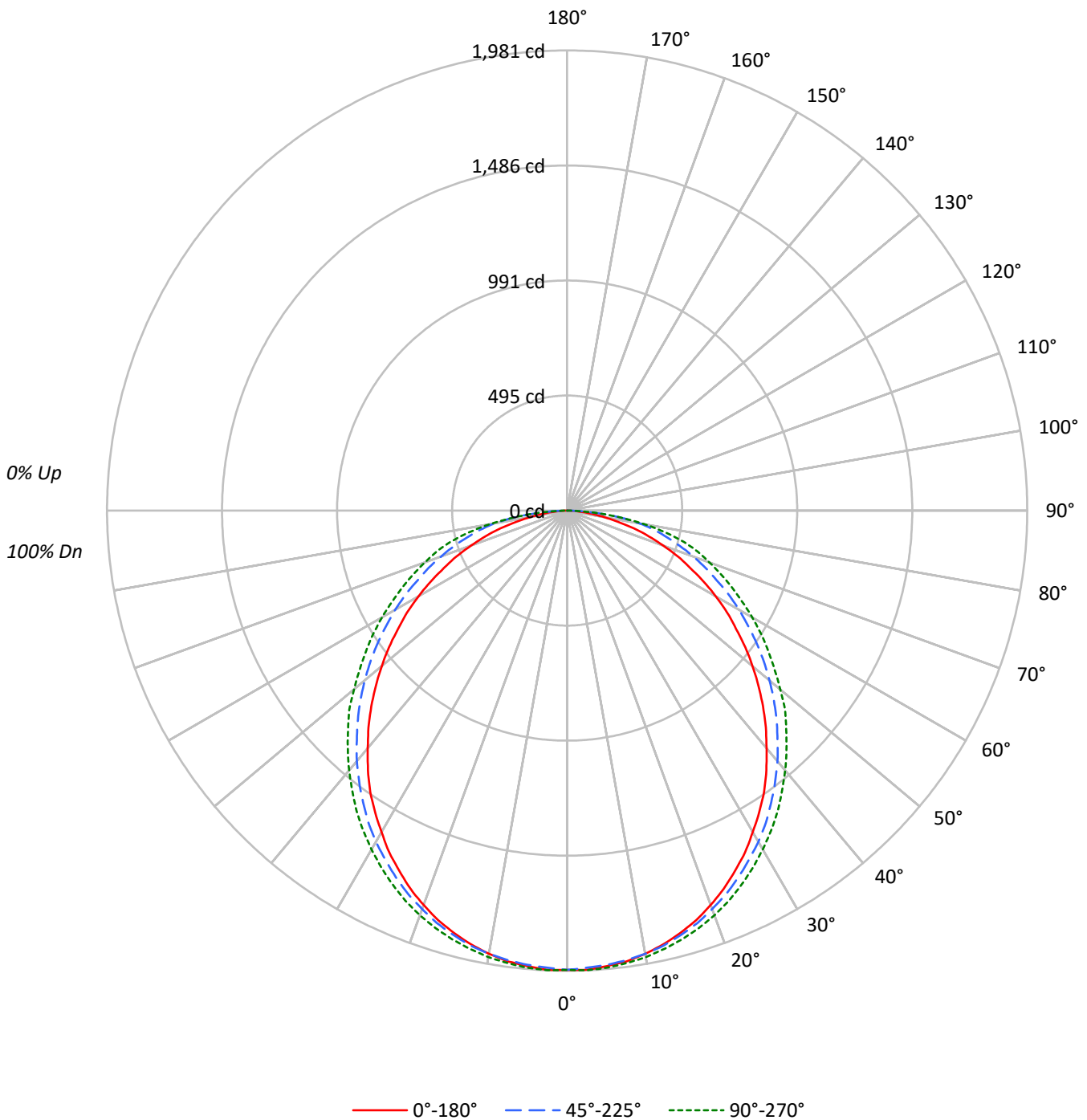
Input Watts (W): 45.477  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P276657

CATALOG NUMBER: 24CZ2-60HE-S-UNV-L92765-W2A1-U-5500K

### Luminous Intensity Polar Plot





TEST NUMBER: P276657

CATALOG NUMBER: 24CZ2-60HE-S-UNV-L92765-W2A1-U-5500K

**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°	2660	2660	2660
5°	2658	2651	2668
10°	2648	2648	2667
15°	2622	2634	2662
20°	2588	2613	2654
25°	2540	2588	2638
30°	2483	2558	2616
35°	2428	2516	2596
40°	2346	2474	2565
45°	2269	2425	2538
50°	2182	2380	2507
55°	2084	2336	2483
60°	1987	2299	2477
65°	1861	2259	2493
70°	1723	2271	2560
75°	1543	2314	2704
80°	1247	2452	2645
85°	939	2152	2098



TEST NUMBER: P276657

CATALOG NUMBER: 24CZ2-60HE-S-UNV-L92765-W2A1-U-5500K

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	187.2	3.3
10°-20°	534.8	9.5
20°-30°	804.0	14.3
30°-40°	957.7	17.0
40°-50°	980.1	17.4
50°-60°	882.4	15.7
60°-70°	693.0	12.3
70°-80°	449.7	8.0
80°-90°	139.1	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°	1526.0	27.1
0°-40°	2483.7	44.1
0°-60°	4346.2	77.2
0°-90°	5628.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5628.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1977	1977	1977	1977	1977	
5°	1968	1972	1963	1974	1975	187
15°	1882	1888	1891	1907	1911	531
25°	1711	1725	1743	1772	1777	788
35°	1478	1496	1532	1570	1580	922
45°	1192	1221	1275	1323	1334	919
55°	888	928	996	1048	1058	797
65°	585	629	710	769	783	582
75°	297	354	445	506	520	314
85°	61	113	139	136	136	73
90°	0	0	0	0	0	



TEST NUMBER: P276657

CATALOG NUMBER: 24CZ2-60HE-S-UNV-L92765-W2A1-U-5500K

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1977.2	1977.2	1977.2	1977.2	1977.2
2.5°	1978.9	1978.9	1970.0	1978.9	1980.7
5°	1968.2	1971.8	1962.9	1973.6	1975.4
7.5°	1957.5	1957.5	1952.1	1962.9	1964.6
10°	1937.8	1939.6	1937.8	1950.3	1952.1
12.5°	1912.8	1916.4	1918.2	1930.7	1932.5
15°	1882.4	1887.8	1891.3	1907.4	1911.0
17.5°	1848.4	1853.8	1862.7	1880.6	1884.2
20°	1807.3	1814.5	1825.2	1848.4	1853.8
22.5°	1762.6	1769.8	1787.7	1809.1	1818.1
25°	1710.8	1725.1	1743.0	1771.6	1776.9
27.5°	1658.9	1671.5	1694.7	1725.1	1732.2
30°	1598.2	1617.8	1646.4	1676.8	1684.0
32.5°	1539.2	1558.8	1592.8	1625.0	1633.9
35°	1478.4	1496.3	1532.0	1569.6	1580.3
37.5°	1408.7	1431.9	1471.2	1508.8	1519.5
40°	1335.4	1364.0	1408.7	1448.0	1460.5
42.5°	1265.7	1296.1	1340.7	1383.6	1398.0
45°	1192.4	1221.0	1274.6	1322.9	1333.6
47.5°	1117.3	1149.5	1206.7	1254.9	1272.8
50°	1042.2	1076.2	1137.0	1187.0	1197.7
52.5°	967.1	1002.9	1067.2	1120.9	1126.2
55°	888.5	927.8	995.7	1047.6	1058.3
57.5°	817.0	850.9	924.2	977.8	990.4
60°	738.3	775.8	854.5	904.6	920.6
62.5°	663.2	702.6	784.8	834.8	849.1
65°	584.6	629.3	709.7	768.7	783.0
67.5°	516.6	559.5	645.3	702.6	716.9
70°	438.0	486.2	577.4	636.4	650.7
72.5°	370.0	420.1	511.3	568.5	589.9
75°	296.8	354.0	445.1	505.9	520.2
77.5°	225.2	291.4	384.3	430.8	430.8
80°	160.9	230.6	316.4	337.9	341.4
82.5°	105.5	173.4	234.2	232.4	232.4
85°	60.8	112.6	139.4	135.9	135.9
87.5°	23.2	46.5	50.1	50.1	48.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)