

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: P276665

Luminaire Tested: **24CZ2-65HE-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: P276665  
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-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: 6005.7 lumens  
Efficiency: N/A  
Efficacy: 120.0 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.27 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

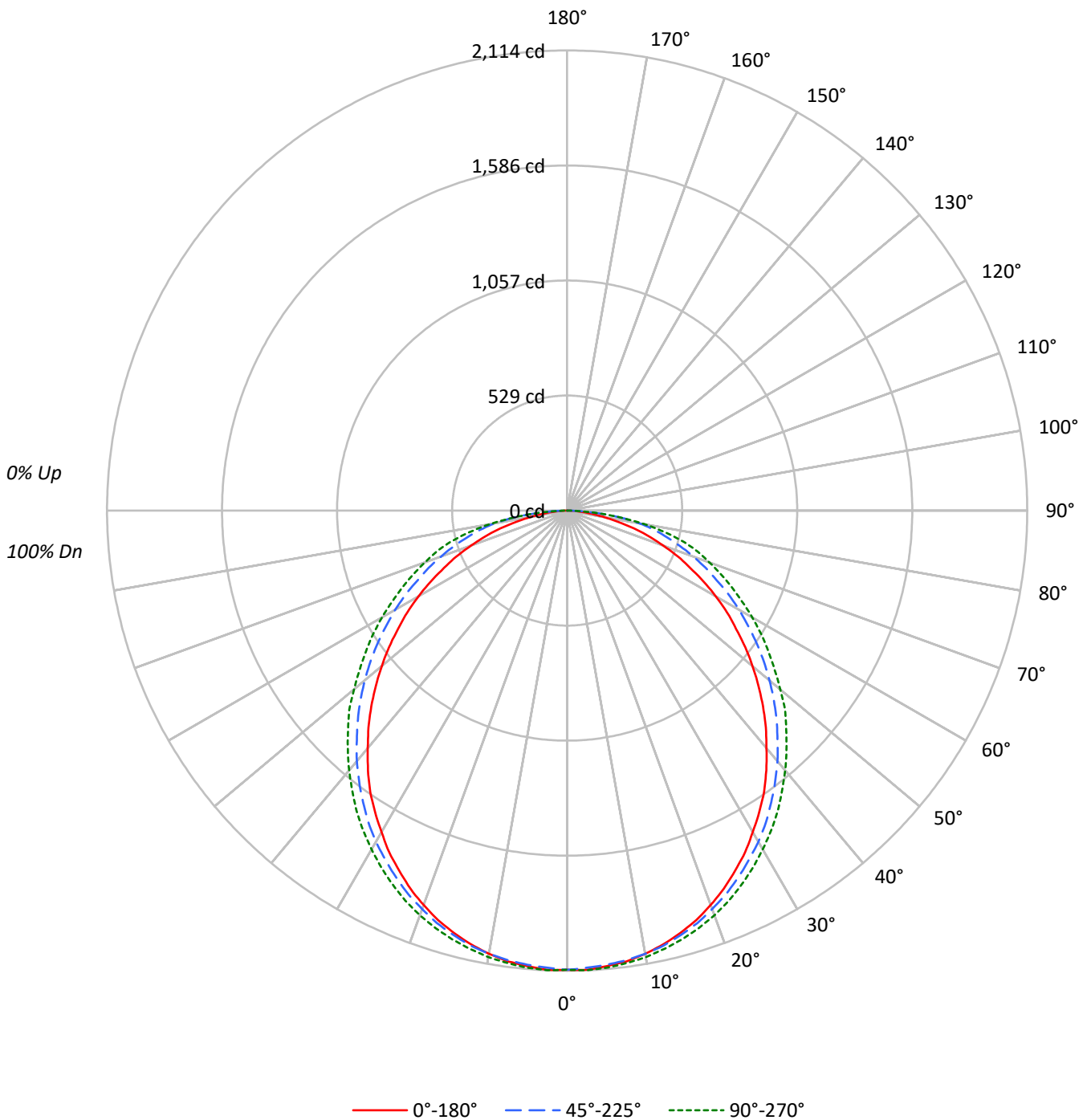
Input Watts (W): 50.034  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P276665

CATALOG NUMBER: 24CZ2-65HE-S-UNV-L92765-W2A1-U-5000K

### Luminous Intensity Polar Plot





TEST NUMBER: P276665

CATALOG NUMBER: 24CZ2-65HE-S-UNV-L92765-W2A1-U-5000K

**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	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					100			
1	108	103	99	95	106	101	97	93	97	93	90	93	90	88	89	87	85	83					83			
2	98	90	83	77	96	88	81	76	84	79	74	81	76	72	78	74	71	69					69			
3	89	79	70	64	87	77	69	63	74	67	62	71	66	61	69	64	60	58					58			
4	82	70	61	54	80	68	60	54	66	59	53	63	57	52	61	56	51	49					49			
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42					42			
6	70	56	47	40	68	55	47	40	53	46	40	52	45	40	50	44	39	37					37			
7	64	51	42	36	63	50	42	36	48	41	35	47	40	35	46	39	35	33					33			
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29					29			
9	56	43	34	29	55	42	34	29	41	34	28	40	33	28	39	33	28	26					26			
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24					24			

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	2839	2839	2839
5°	2837	2829	2847
10°	2825	2825	2846
15°	2798	2811	2841
20°	2761	2789	2832
25°	2710	2761	2815
30°	2650	2730	2792
35°	2591	2685	2770
40°	2503	2640	2737
45°	2421	2588	2708
50°	2328	2540	2675
55°	2224	2493	2649
60°	2120	2454	2644
65°	1986	2411	2660
70°	1839	2424	2732
75°	1646	2469	2886
80°	1330	2617	2824
85°	1002	2297	2238



TEST NUMBER: P276665

CATALOG NUMBER: 24CZ2-65HE-S-UNV-L92765-W2A1-U-5000K

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	199.7	3.3
10°-20°	570.7	9.5
20°-30°	857.9	14.3
30°-40°	1021.9	17.0
40°-50°	1045.9	17.4
50°-60°	941.6	15.7
60°-70°	739.5	12.3
70°-80°	479.9	8.0
80°-90°	148.4	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°	1628.4	27.1
0°-40°	2650.3	44.1
0°-60°	4637.9	77.2
0°-90°	6005.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6005.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2110	2110	2110	2110	2110	
5°	2100	2104	2095	2106	2108	200
15°	2009	2014	2018	2035	2039	566
25°	1826	1841	1860	1890	1896	841
35°	1578	1597	1635	1675	1686	984
45°	1272	1303	1360	1412	1423	981
55°	948	990	1063	1118	1129	850
65°	624	672	757	820	836	621
75°	317	378	475	540	555	335
85°	65	120	149	145	145	78
90°	0	0	0	0	0	



TEST NUMBER: P276665

CATALOG NUMBER: 24CZ2-65HE-S-UNV-L92765-W2A1-U-5000K

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2109.8	2109.8	2109.8	2109.8	2109.8
2.5°	2111.8	2111.8	2102.2	2111.8	2113.7
5°	2100.3	2104.1	2094.6	2106.0	2107.9
7.5°	2088.9	2088.9	2083.1	2094.6	2096.5
10°	2067.9	2069.8	2067.9	2081.2	2083.1
12.5°	2041.2	2045.0	2046.9	2060.2	2062.2
15°	2008.7	2014.5	2018.3	2035.4	2039.3
17.5°	1972.5	1978.2	1987.8	2006.8	2010.6
20°	1928.6	1936.3	1947.7	1972.5	1978.2
22.5°	1880.9	1888.6	1907.6	1930.5	1940.1
25°	1825.6	1840.9	1859.9	1890.5	1896.2
27.5°	1770.3	1783.6	1808.4	1840.9	1848.5
30°	1705.4	1726.4	1756.9	1789.4	1797.0
32.5°	1642.5	1663.5	1699.7	1734.0	1743.6
35°	1577.6	1596.7	1634.8	1674.9	1686.4
37.5°	1503.2	1528.0	1570.0	1610.0	1621.5
40°	1425.0	1455.5	1503.2	1545.2	1558.5
42.5°	1350.6	1383.0	1430.7	1476.5	1491.8
45°	1272.4	1302.9	1360.1	1411.7	1423.1
47.5°	1192.3	1226.6	1287.7	1339.2	1358.2
50°	1112.2	1148.4	1213.3	1266.7	1278.1
52.5°	1032.0	1070.2	1138.9	1196.1	1201.8
55°	948.1	990.1	1062.6	1117.9	1129.3
57.5°	871.8	908.0	986.2	1043.5	1056.8
60°	787.9	827.9	911.9	965.3	982.4
62.5°	707.7	749.7	837.5	890.9	906.1
65°	623.8	671.5	757.3	820.3	835.5
67.5°	551.3	597.1	688.7	749.7	765.0
70°	467.4	518.9	616.2	679.1	694.4
72.5°	394.9	448.3	545.6	606.6	629.5
75°	316.7	377.7	475.0	539.9	555.1
77.5°	240.4	310.9	410.1	459.7	459.7
80°	171.7	246.1	337.7	360.5	364.4
82.5°	112.6	185.0	249.9	248.0	248.0
85°	64.9	120.2	148.8	145.0	145.0
87.5°	24.8	49.6	53.4	53.4	51.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)