

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: P276661

Luminaire Tested: **24CZ2-65HE-S-UNV-L92765-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: P276661  
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-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: 5294.0 lumens  
Efficiency: N/A  
Efficacy: 109.3 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

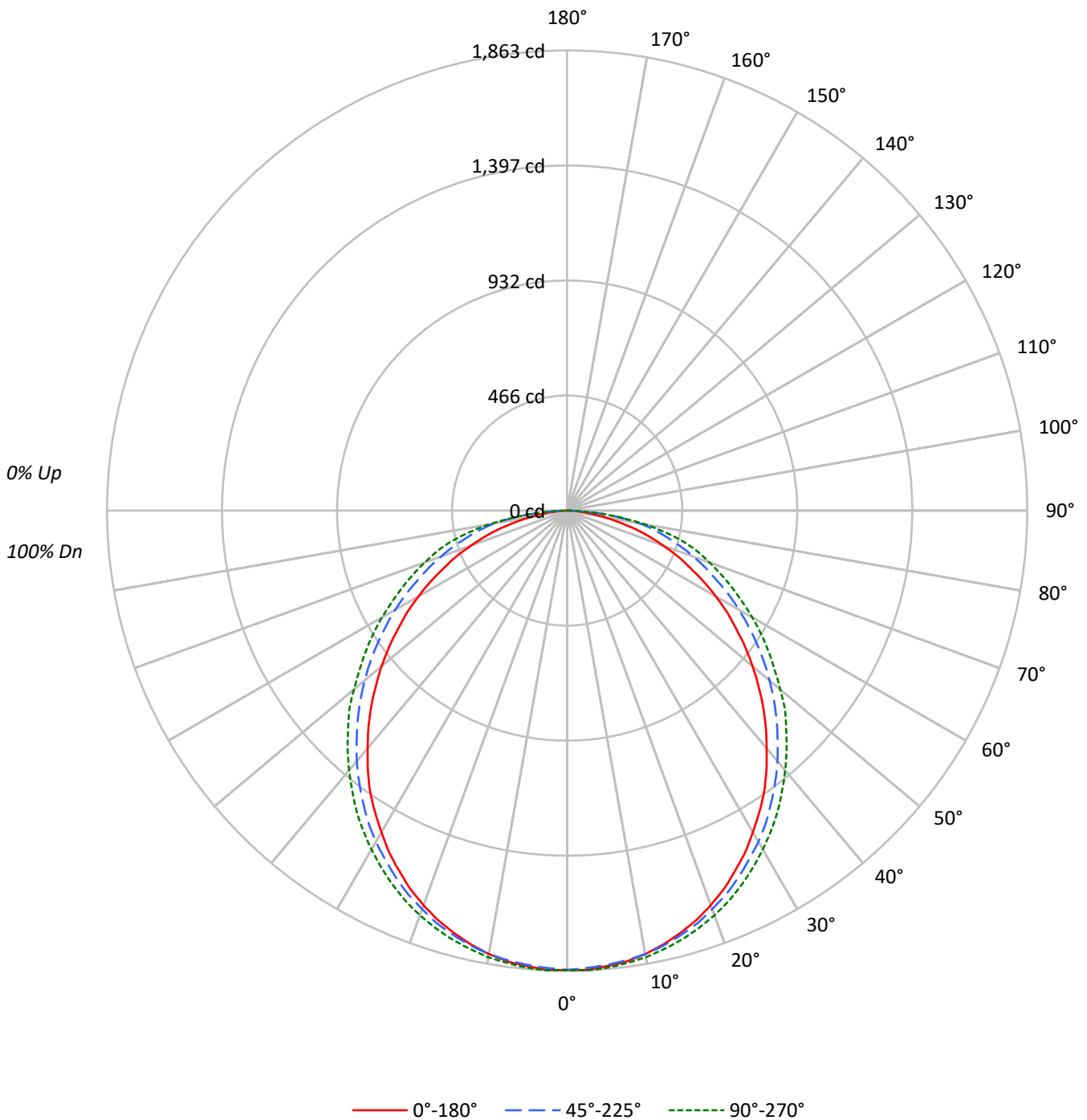
Input Watts (W): 48.453  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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°	2502	2502	2502
5°	2501	2494	2510
10°	2490	2490	2509
15°	2467	2478	2504
20°	2434	2458	2497
25°	2389	2434	2481
30°	2336	2406	2461
35°	2284	2367	2442
40°	2206	2327	2413
45°	2134	2281	2387
50°	2052	2239	2358
55°	1960	2197	2335
60°	1869	2163	2330
65°	1751	2125	2345
70°	1621	2137	2408
75°	1451	2177	2544
80°	1172	2306	2489
85°	883	2025	1973



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	176.1	3.3
10°-20°	503.1	9.5
20°-30°	756.3	14.3
30°-40°	900.8	17.0
40°-50°	922.0	17.4
50°-60°	830.0	15.7
60°-70°	651.8	12.3
70°-80°	423.1	8.0
80°-90°	130.8	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°	1435.4	27.1
0°-40°	2336.3	44.1
0°-60°	4088.3	77.2
0°-90°	5294.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5294.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1860	1860	1860	1860	1860	
5°	1851	1855	1846	1856	1858	176
15°	1771	1776	1779	1794	1798	499
25°	1609	1623	1640	1666	1672	741
35°	1391	1408	1441	1476	1486	868
45°	1122	1148	1199	1244	1254	865
55°	836	873	937	985	996	749
65°	550	592	668	723	736	547
75°	279	333	419	476	489	295
85°	57	106	131	128	128	69
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1859.8	1859.8	1859.8	1859.8	1859.8
2.5°	1861.5	1861.5	1853.1	1861.5	1863.2
5°	1851.4	1854.8	1846.4	1856.5	1858.1
7.5°	1841.3	1841.3	1836.3	1846.4	1848.1
10°	1822.8	1824.5	1822.8	1834.6	1836.3
12.5°	1799.3	1802.6	1804.3	1816.1	1817.8
15°	1770.7	1775.7	1779.1	1794.2	1797.6
17.5°	1738.7	1743.8	1752.2	1769.0	1772.4
20°	1700.1	1706.8	1716.9	1738.7	1743.8
22.5°	1658.0	1664.8	1681.6	1701.8	1710.2
25°	1609.3	1622.7	1639.5	1666.4	1671.5
27.5°	1560.5	1572.3	1594.1	1622.7	1629.4
30°	1503.3	1521.8	1548.7	1577.3	1584.0
32.5°	1447.8	1466.3	1498.3	1528.6	1537.0
35°	1390.7	1407.5	1441.1	1476.4	1486.5
37.5°	1325.1	1346.9	1383.9	1419.2	1429.3
40°	1256.1	1283.0	1325.1	1362.1	1373.8
42.5°	1190.6	1219.1	1261.2	1301.5	1315.0
45°	1121.6	1148.5	1199.0	1244.4	1254.5
47.5°	1051.0	1081.3	1135.1	1180.5	1197.3
50°	980.4	1012.3	1069.5	1116.6	1126.7
52.5°	909.7	943.4	1003.9	1054.3	1059.4
55°	835.7	872.7	936.6	985.4	995.5
57.5°	768.5	800.4	869.4	919.8	931.6
60°	694.5	729.8	803.8	850.9	866.0
62.5°	623.9	660.9	738.2	785.3	798.7
65°	549.9	591.9	667.6	723.1	736.5
67.5°	486.0	526.3	607.0	660.9	674.3
70°	412.0	457.4	543.1	598.6	612.1
72.5°	348.1	395.2	480.9	534.7	554.9
75°	279.1	333.0	418.7	475.9	489.3
77.5°	211.9	274.1	361.5	405.3	405.3
80°	151.3	216.9	297.6	317.8	321.2
82.5°	99.2	163.1	220.3	218.6	218.6
85°	57.2	105.9	131.2	127.8	127.8
87.5°	21.9	43.7	47.1	47.1	45.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)