

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: P276670

Luminaire Tested: **24CZ2-70HE-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: P276670  
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-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**

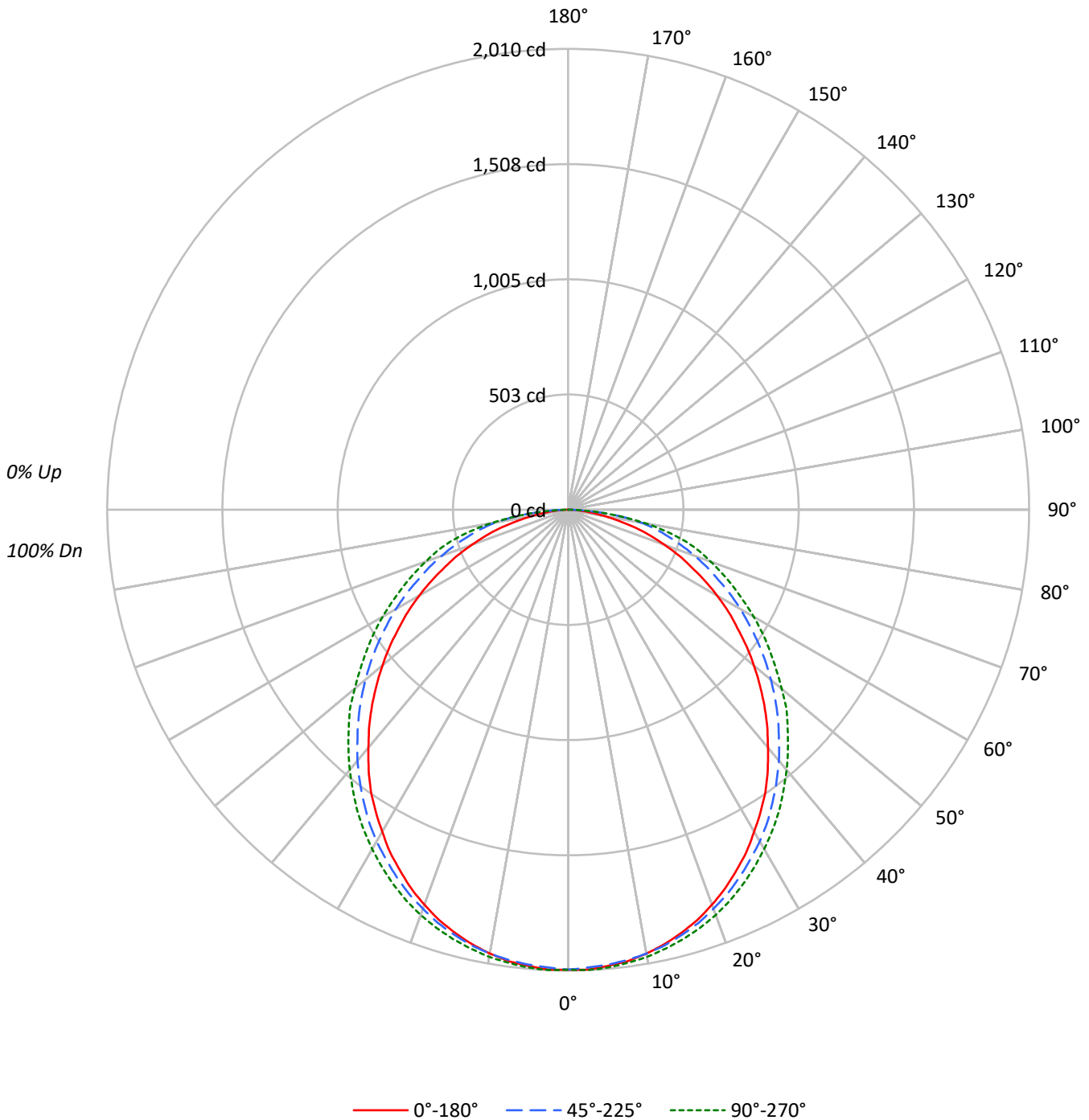
Lumens per Lamp: N/A  
Luminaire Lumens: 5710.5 lumens  
Efficiency: N/A  
Efficacy: 107.3 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.27 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 53.196  
Input Voltage (V): 120  
Input Current (Ain): 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°	2699	2699	2699
5°	2697	2690	2707
10°	2686	2686	2706
15°	2661	2673	2701
20°	2626	2652	2693
25°	2577	2625	2677
30°	2519	2596	2655
35°	2464	2553	2634
40°	2380	2510	2603
45°	2302	2461	2575
50°	2214	2415	2544
55°	2115	2370	2519
60°	2016	2333	2514
65°	1888	2293	2529
70°	1748	2305	2597
75°	1565	2348	2744
80°	1265	2488	2684
85°	953	2184	2129



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	189.9	3.3
10°-20°	542.7	9.5
20°-30°	815.8	14.3
30°-40°	971.7	17.0
40°-50°	994.5	17.4
50°-60°	895.3	15.7
60°-70°	703.1	12.3
70°-80°	456.3	8.0
80°-90°	141.1	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°	1548.4	27.1
0°-40°	2520.1	44.1
0°-60°	4409.9	77.2
0°-90°	5710.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5710.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2006	2006	2006	2006	2006	
5°	1997	2001	1992	2002	2004	190
15°	1910	1915	1919	1935	1939	539
25°	1736	1750	1768	1798	1803	800
35°	1500	1518	1554	1593	1604	936
45°	1210	1239	1293	1342	1353	933
55°	902	941	1010	1063	1074	808
65°	593	638	720	780	794	590
75°	301	359	452	513	528	319
85°	62	114	142	138	138	74
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2006.1	2006.1	2006.1	2006.1	2006.1
2.5°	2007.9	2007.9	1998.9	2007.9	2009.8
5°	1997.1	2000.7	1991.6	2002.5	2004.3
7.5°	1986.2	1986.2	1980.7	1991.6	1993.4
10°	1966.2	1968.0	1966.2	1978.9	1980.7
12.5°	1940.8	1944.5	1946.3	1959.0	1960.8
15°	1910.0	1915.4	1919.1	1935.4	1939.0
17.5°	1875.5	1881.0	1890.0	1908.2	1911.8
20°	1833.8	1841.1	1852.0	1875.5	1881.0
22.5°	1788.5	1795.7	1813.9	1835.6	1844.7
25°	1735.9	1750.4	1768.5	1797.5	1803.0
27.5°	1683.3	1696.0	1719.5	1750.4	1757.6
30°	1621.6	1641.5	1670.6	1701.4	1708.7
32.5°	1561.7	1581.7	1616.2	1648.8	1657.9
35°	1500.1	1518.2	1554.5	1592.6	1603.5
37.5°	1429.3	1452.9	1492.8	1530.9	1541.8
40°	1355.0	1384.0	1429.3	1469.2	1481.9
42.5°	1284.2	1315.1	1360.4	1403.9	1418.4
45°	1209.8	1238.9	1293.3	1342.3	1353.1
47.5°	1133.7	1166.3	1224.4	1273.3	1291.5
50°	1057.5	1091.9	1153.6	1204.4	1215.3
52.5°	981.3	1017.6	1082.9	1137.3	1142.7
55°	901.5	941.4	1010.3	1062.9	1073.8
57.5°	828.9	863.4	937.8	992.2	1004.9
60°	749.1	787.2	867.0	917.8	934.1
62.5°	672.9	712.8	796.3	847.1	861.6
65°	593.1	638.5	720.1	780.0	794.5
67.5°	524.2	567.7	654.8	712.8	727.4
70°	444.4	493.4	585.9	645.7	660.2
72.5°	375.5	426.3	518.8	576.8	598.6
75°	301.1	359.1	451.7	513.3	527.8
77.5°	228.5	295.7	390.0	437.1	437.1
80°	163.2	234.0	321.1	342.8	346.4
82.5°	107.0	175.9	237.6	235.8	235.8
85°	61.7	114.3	141.5	137.9	137.9
87.5°	23.6	47.2	50.8	50.8	49.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)