

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: P276428

Luminaire Tested: **24CZ2-70HE-S-UNV-L93050-W2A1-U-3500K**

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: P276428  
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-3500K  
Description: CRUZE 2.0 2x4 TUNABLE WHITE LED TROFFER WITH SMOOTH LENS  
Light Source: (336) 90 CRI LEDS TUNED TO 3500K CCT  
Ballast/Driver: ELECTRONIC DRIVER  
Luminaire Equipment: Sample No.   Condition   Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5957.4 lumens  
Efficiency: N/A  
Efficacy: 108.9 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

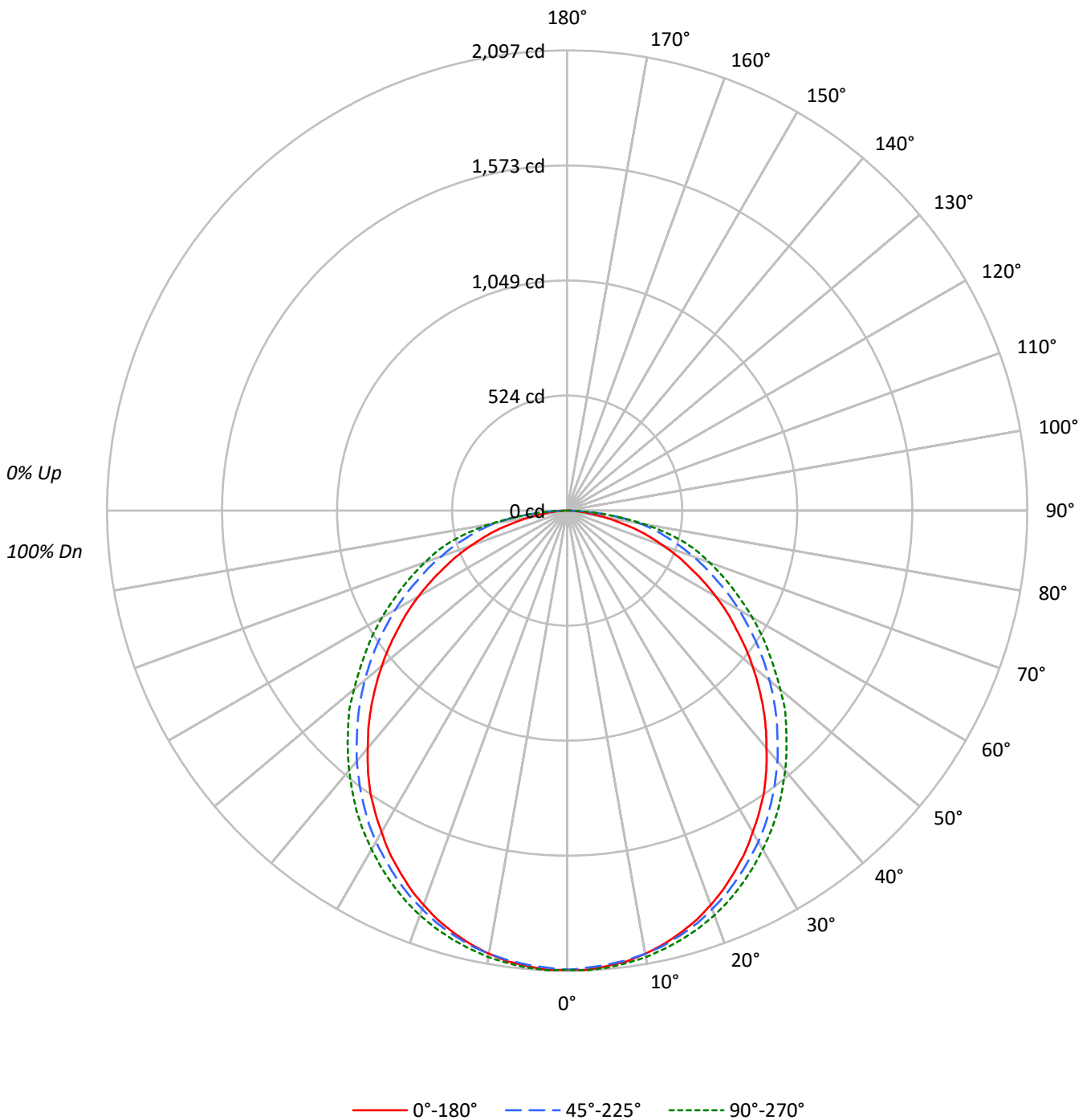
Input Watts (W): 54.680559  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	2816	2816	2816
5°	2814	2806	2824
10°	2802	2802	2823
15°	2776	2789	2818
20°	2739	2766	2810
25°	2688	2739	2792
30°	2628	2708	2769
35°	2570	2664	2748
40°	2483	2619	2715
45°	2402	2567	2686
50°	2309	2519	2654
55°	2206	2472	2628
60°	2103	2434	2622
65°	1970	2392	2639
70°	1824	2404	2710
75°	1633	2450	2863
80°	1320	2595	2800
85°	993	2279	2220



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	198.1	3.3
10°-20°	566.1	9.5
20°-30°	851.0	14.3
30°-40°	1013.7	17.0
40°-50°	1037.5	17.4
50°-60°	934.0	15.7
60°-70°	733.5	12.3
70°-80°	476.1	8.0
80°-90°	147.2	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°	1615.3	27.1
0°-40°	2629.0	44.1
0°-60°	4600.5	77.2
0°-90°	5957.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5957.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2093	2093	2093	2093	2093	
5°	2083	2087	2078	2089	2091	198
15°	1993	1998	2002	2019	2023	562
25°	1811	1826	1845	1875	1881	834
35°	1565	1584	1622	1661	1673	976
45°	1262	1292	1349	1400	1412	973
55°	940	982	1054	1109	1120	843
65°	619	666	751	814	829	616
75°	314	375	471	536	551	332
85°	64	119	148	144	144	78
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2092.9	2092.9	2092.9	2092.9	2092.9
2.5°	2094.8	2094.8	2085.3	2094.8	2096.6
5°	2083.4	2087.2	2077.7	2089.1	2091.0
7.5°	2072.0	2072.0	2066.4	2077.7	2079.6
10°	2051.2	2053.1	2051.2	2064.5	2066.4
12.5°	2024.7	2028.5	2030.4	2043.7	2045.6
15°	1992.6	1998.2	2002.0	2019.1	2022.8
17.5°	1956.6	1962.3	1971.8	1990.7	1994.5
20°	1913.1	1920.7	1932.0	1956.6	1962.3
22.5°	1865.8	1873.4	1892.3	1915.0	1924.4
25°	1810.9	1826.0	1845.0	1875.2	1880.9
27.5°	1756.0	1769.3	1793.9	1826.0	1833.6
30°	1691.7	1712.5	1742.8	1775.0	1782.5
32.5°	1629.3	1650.1	1686.0	1720.1	1729.5
35°	1564.9	1583.8	1621.7	1661.4	1672.8
37.5°	1491.1	1515.7	1557.3	1597.1	1608.4
40°	1413.5	1443.8	1491.1	1532.7	1546.0
42.5°	1339.7	1371.9	1419.2	1464.6	1479.8
45°	1262.1	1292.4	1349.2	1400.3	1411.6
47.5°	1182.7	1216.7	1277.3	1328.4	1347.3
50°	1103.2	1139.2	1203.5	1256.5	1267.8
52.5°	1023.7	1061.6	1129.7	1186.5	1192.1
55°	940.5	982.1	1054.0	1108.9	1120.2
57.5°	864.8	900.7	978.3	1035.1	1048.3
60°	781.5	821.2	904.5	957.5	974.5
62.5°	702.0	743.7	830.7	883.7	898.8
65°	618.8	666.1	751.2	813.7	828.8
67.5°	546.9	592.3	683.1	743.7	758.8
70°	463.6	514.7	611.2	673.7	688.8
72.5°	391.7	444.7	541.2	601.7	624.5
75°	314.1	374.7	471.2	535.5	550.7
77.5°	238.4	308.4	406.8	456.0	456.0
80°	170.3	244.1	334.9	357.6	361.4
82.5°	111.6	183.6	247.9	246.0	246.0
85°	64.3	119.2	147.6	143.8	143.8
87.5°	24.6	49.2	53.0	53.0	51.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)