

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: P276345

Luminaire Tested: **24CZ2-60HE-S-UNV-L83050-W2A1-U-4500K**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P276345  
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-L83050-W2A1-U-4500K  
Description: CRUZE 2.0 2x4 TUNABLE WHITE LED TROFFER WITH SMOOTH LENS  
Light Source: (336) 80 CRI LEDS TUNED TO 4500K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6356.0 lumens  
Efficiency: N/A  
Efficacy: 136.9 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

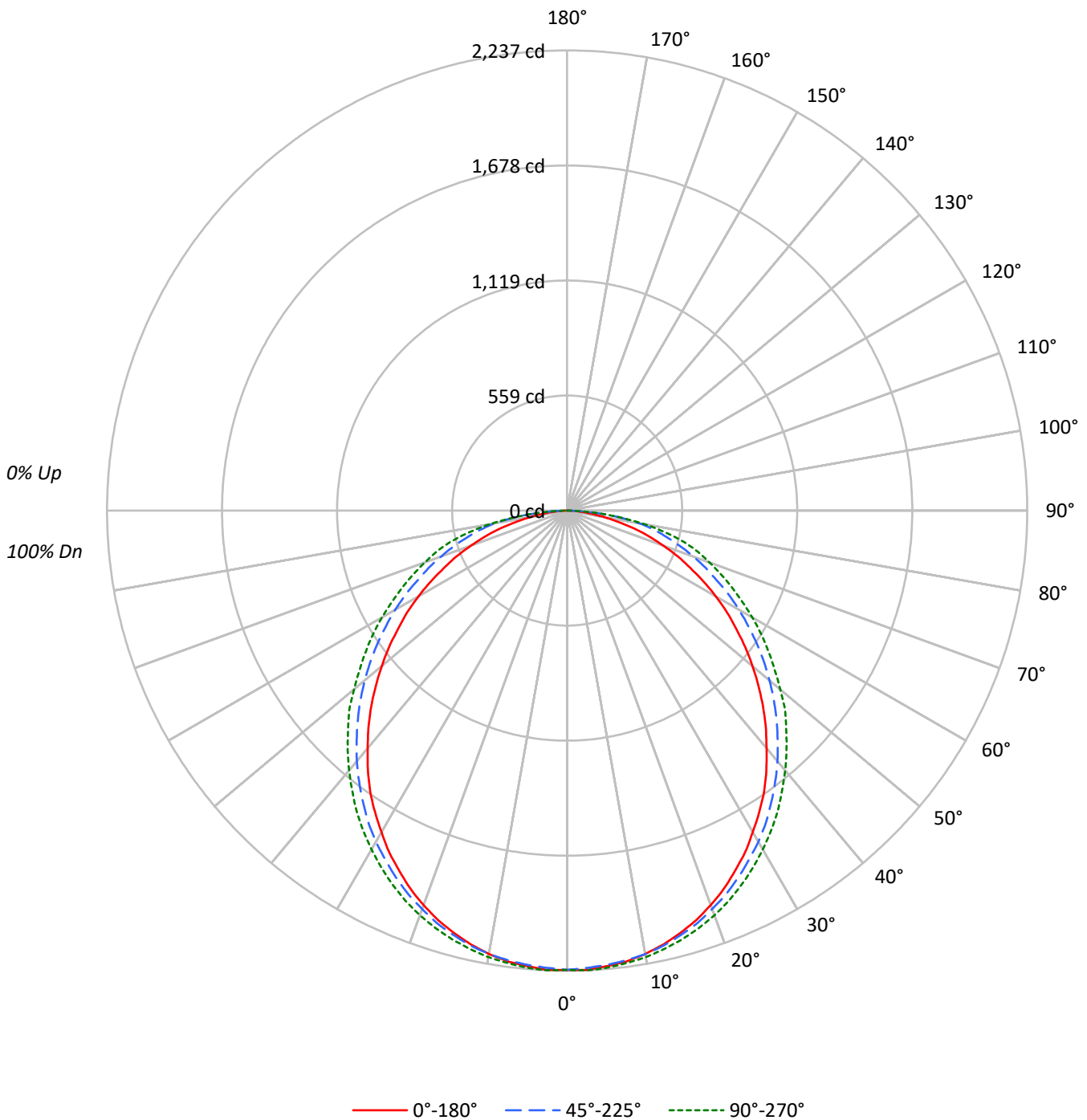
Input Watts (W): 46.437132  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	3004	3004	3004
5°	3002	2994	3013
10°	2990	2990	3012
15°	2961	2975	3006
20°	2923	2951	2998
25°	2868	2922	2979
30°	2804	2889	2955
35°	2742	2842	2931
40°	2649	2794	2897
45°	2562	2739	2866
50°	2464	2688	2831
55°	2354	2638	2804
60°	2244	2597	2798
65°	2102	2552	2815
70°	1946	2565	2891
75°	1742	2613	3054
80°	1408	2768	2988
85°	1059	2431	2368



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	211.4	3.3
10°-20°	604.0	9.5
20°-30°	908.0	14.3
30°-40°	1081.5	17.0
40°-50°	1106.9	17.4
50°-60°	996.5	15.7
60°-70°	782.6	12.3
70°-80°	507.9	8.0
80°-90°	157.1	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°	1723.4	27.1
0°-40°	2804.9	44.1
0°-60°	4908.4	77.2
0°-90°	6356.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6356.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2233	2233	2233	2233	2233	
5°	2223	2227	2217	2229	2231	211
15°	2126	2132	2136	2154	2158	599
25°	1932	1948	1968	2001	2007	890
35°	1670	1690	1730	1773	1785	1042
45°	1347	1379	1440	1494	1506	1038
55°	1003	1048	1124	1183	1195	900
65°	660	711	802	868	884	657
75°	335	400	503	571	588	355
85°	69	127	158	153	153	83
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2232.9	2232.9	2232.9	2232.9	2232.9
2.5°	2234.9	2234.9	2224.8	2234.9	2236.9
5°	2222.8	2226.8	2216.8	2228.9	2230.9
7.5°	2210.7	2210.7	2204.6	2216.8	2218.8
10°	2188.5	2190.5	2188.5	2202.6	2204.6
12.5°	2160.2	2164.3	2166.3	2180.4	2182.4
15°	2125.9	2132.0	2136.0	2154.2	2158.2
17.5°	2087.5	2093.6	2103.7	2123.9	2127.9
20°	2041.1	2049.2	2061.3	2087.5	2093.6
22.5°	1990.6	1998.7	2018.9	2043.1	2053.2
25°	1932.1	1948.2	1968.4	2000.7	2006.8
27.5°	1873.5	1887.7	1913.9	1948.2	1956.3
30°	1804.9	1827.1	1859.4	1893.7	1901.8
32.5°	1738.3	1760.5	1798.8	1835.2	1845.3
35°	1669.6	1689.8	1730.2	1772.6	1784.7
37.5°	1590.9	1617.1	1661.6	1704.0	1716.1
40°	1508.1	1540.4	1590.9	1635.3	1649.4
42.5°	1429.4	1463.7	1514.2	1562.6	1578.8
45°	1346.6	1378.9	1439.5	1494.0	1506.1
47.5°	1261.8	1298.2	1362.8	1417.3	1437.5
50°	1177.0	1215.4	1284.0	1340.6	1352.7
52.5°	1092.2	1132.6	1205.3	1265.9	1271.9
55°	1003.4	1047.8	1124.5	1183.1	1195.2
57.5°	922.6	961.0	1043.8	1104.3	1118.5
60°	833.8	876.2	965.0	1021.6	1039.7
62.5°	749.0	793.4	886.3	942.8	959.0
65°	660.2	710.7	801.5	868.1	884.3
67.5°	583.5	631.9	728.8	793.4	809.6
70°	494.6	549.1	652.1	718.7	734.9
72.5°	417.9	474.4	577.4	642.0	666.2
75°	335.1	399.7	502.7	571.3	587.5
77.5°	254.4	329.1	434.1	486.6	486.6
80°	181.7	260.4	357.3	381.6	385.6
82.5°	119.1	195.8	264.5	262.5	262.5
85°	68.6	127.2	157.5	153.4	153.4
87.5°	26.2	52.5	56.5	56.5	54.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)