

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: P389014

Luminaire Tested: **24CZ2-85VHE-UNV-L930-CD1-SWPD1-U**

Issue Date: 2/28/2020

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: P389014
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-5)
Test Lab: INNOVATIONS CENTER(G3)
Issue Date: 2/28/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-85VHE-UNV-L930-CD1-SWPD1-U
Description: 2x4 CRUZE LED TROFFER WITH 3000K, 90 LEDS, AND RIBBED LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7007.6 lumens
Efficiency: N/A
Efficacy: 121.0 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.27 / 1.37
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

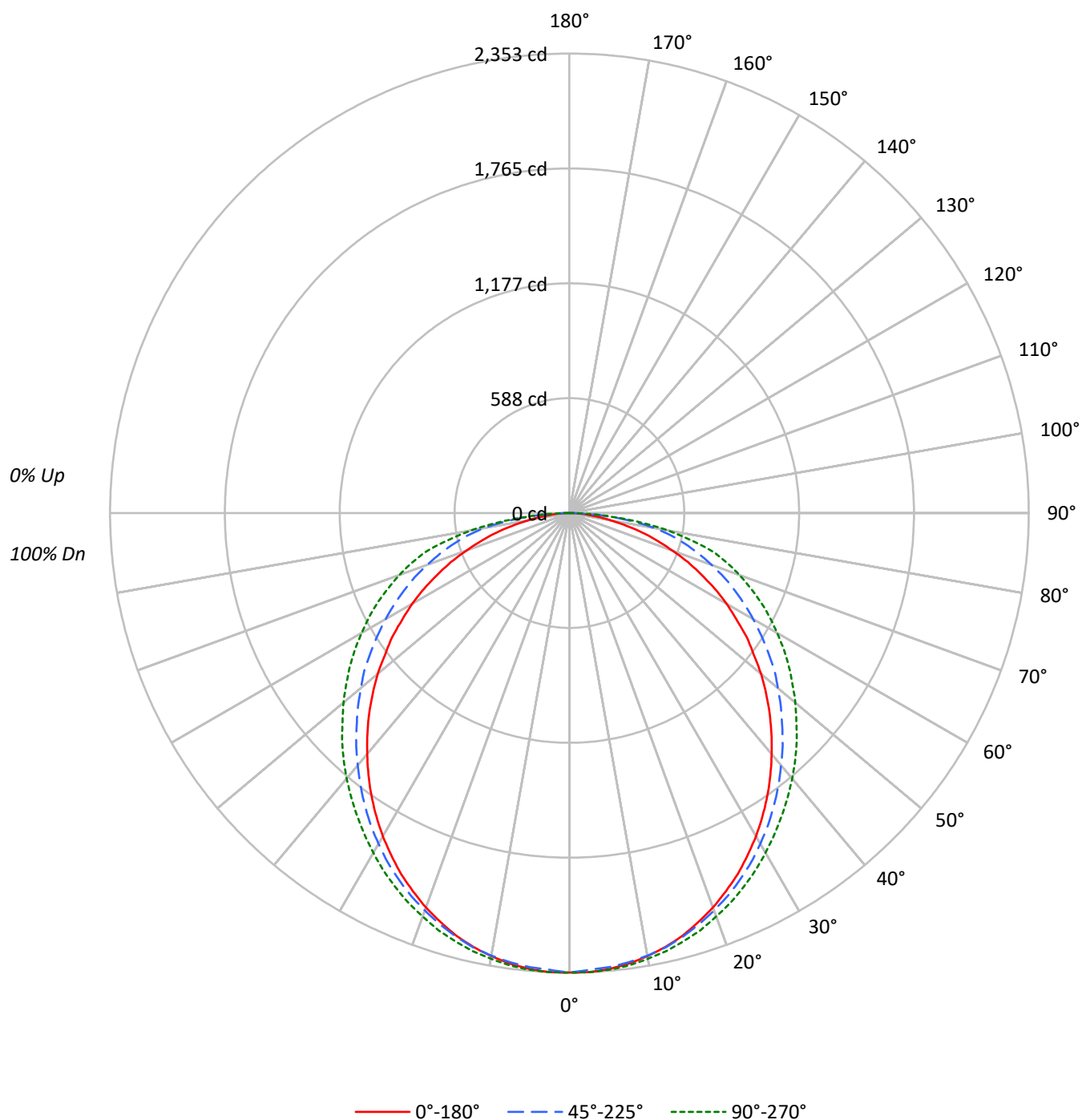
Input Watts (W): 57.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100		
1	108	103	98	94	105	100	96	92	96	93	89	92	89	87	89	86	84	82		
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67		
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	58	56		
4	81	69	59	52	79	67	59	52	65	57	51	62	56	51	60	55	50	48		
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41		
6	69	55	46	39	67	54	45	39	52	44	39	50	44	38	49	43	38	36		
7	64	50	41	35	62	49	40	34	47	40	34	46	39	34	45	38	34	32		
8	59	45	37	31	58	45	36	31	43	36	30	42	35	30	41	35	30	28		
9	55	42	33	28	54	41	33	28	40	33	27	39	32	27	38	32	27	25		
10	52	38	30	25	51	38	30	25	37	30	25	36	29	25	35	29	25	23		

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3166	3166	3166
5°	3165	3153	3171
10°	3147	3144	3167
15°	3121	3127	3160
20°	3077	3101	3148
25°	3028	3073	3135
30°	2969	3038	3121
35°	2904	3000	3112
40°	2830	2962	3118
45°	2759	2933	3133
50°	2683	2918	3162
55°	2601	2913	3220
60°	2499	2926	3304
65°	2368	2971	3447
70°	2199	3045	3643
75°	2006	3198	3951
80°	1649	3443	3950
85°	1264	3177	3393



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	222.5	3.2
10°-20°	635.3	9.1
20°-30°	956.0	13.6
30°-40°	1145.6	16.3
40°-50°	1193.9	17.0
50°-60°	1110.8	15.9
60°-70°	914.8	13.1
70°-80°	623.1	8.9
80°-90°	205.7	2.9
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°	1813.8	25.9
0°-40°	2959.4	42.2
0°-60°	5264.0	75.1
0°-90°	7007.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7007.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2353	2353	2353	2353	2353	
5°	2343	2343	2334	2346	2348	222
15°	2240	2243	2245	2266	2269	631
25°	2039	2049	2070	2105	2112	939
35°	1768	1789	1827	1876	1894	1105
45°	1450	1480	1541	1618	1646	1118
55°	1109	1146	1242	1340	1373	988
65°	744	807	933	1043	1083	738
75°	386	472	615	725	760	407
85°	82	159	206	220	220	101
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2352.8	2352.8	2352.8	2352.8	2352.8
2.5°	2352.8	2352.8	2341.1	2352.8	2352.8
5°	2343.4	2343.4	2334.1	2345.8	2348.1
7.5°	2327.1	2329.4	2320.0	2334.1	2336.4
10°	2303.7	2306.0	2301.3	2315.4	2317.7
12.5°	2275.6	2277.9	2277.9	2294.3	2296.6
15°	2240.5	2242.9	2245.2	2266.2	2268.6
17.5°	2196.1	2203.1	2207.8	2233.5	2238.2
20°	2149.3	2156.3	2165.7	2193.7	2198.4
22.5°	2095.5	2104.9	2121.2	2151.6	2158.7
25°	2039.4	2048.7	2069.8	2104.9	2111.9
27.5°	1976.2	1990.3	2016.0	2053.4	2062.8
30°	1910.8	1924.8	1955.2	1994.9	2009.0
32.5°	1840.6	1859.3	1894.4	1938.8	1952.9
35°	1768.1	1789.1	1826.6	1875.7	1894.4
37.5°	1690.9	1714.3	1758.7	1812.5	1835.9
40°	1611.4	1639.5	1686.2	1749.4	1775.1
42.5°	1531.9	1557.6	1616.1	1683.9	1712.0
45°	1450.0	1480.4	1541.2	1618.4	1646.5
47.5°	1365.8	1396.2	1468.7	1550.6	1576.3
50°	1281.6	1312.0	1393.9	1480.4	1510.8
52.5°	1190.4	1230.2	1323.7	1410.3	1440.7
55°	1108.6	1146.0	1241.9	1340.1	1372.8
57.5°	1015.0	1059.5	1164.7	1267.6	1302.7
60°	928.5	975.3	1087.5	1192.8	1227.8
62.5°	839.6	891.1	1010.3	1117.9	1157.7
65°	743.7	806.9	933.2	1043.1	1082.8
67.5°	657.2	722.7	856.0	968.2	1003.3
70°	559.0	638.5	774.1	886.4	926.1
72.5°	474.8	554.3	696.9	806.9	846.6
75°	385.9	472.4	615.1	725.0	760.1
77.5°	297.0	392.9	535.6	619.8	631.5
80°	212.8	313.4	444.4	493.5	509.8
82.5°	149.7	240.9	327.4	360.2	369.5
85°	81.9	159.0	205.8	219.8	219.8
87.5°	35.1	67.8	81.9	84.2	86.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)