

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: P388250

Luminaire Tested: **22CZ2-90VHE-SQR-UNV-L930-CD1-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: P388250
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1910-542-6)
Test Lab: INNOVATIONS CENTER(G3)
Issue Date: 2/28/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 22CZ2-90VHE-SQR-UNV-L930-CD1-U
Description: 2x2 CRUZE LED TROFFER WITH 3000K, 90 LEDS, AND SQUARE LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7230.5 lumens
Efficiency: N/A
Efficacy: 106.0 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 1.31 / 1.37
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

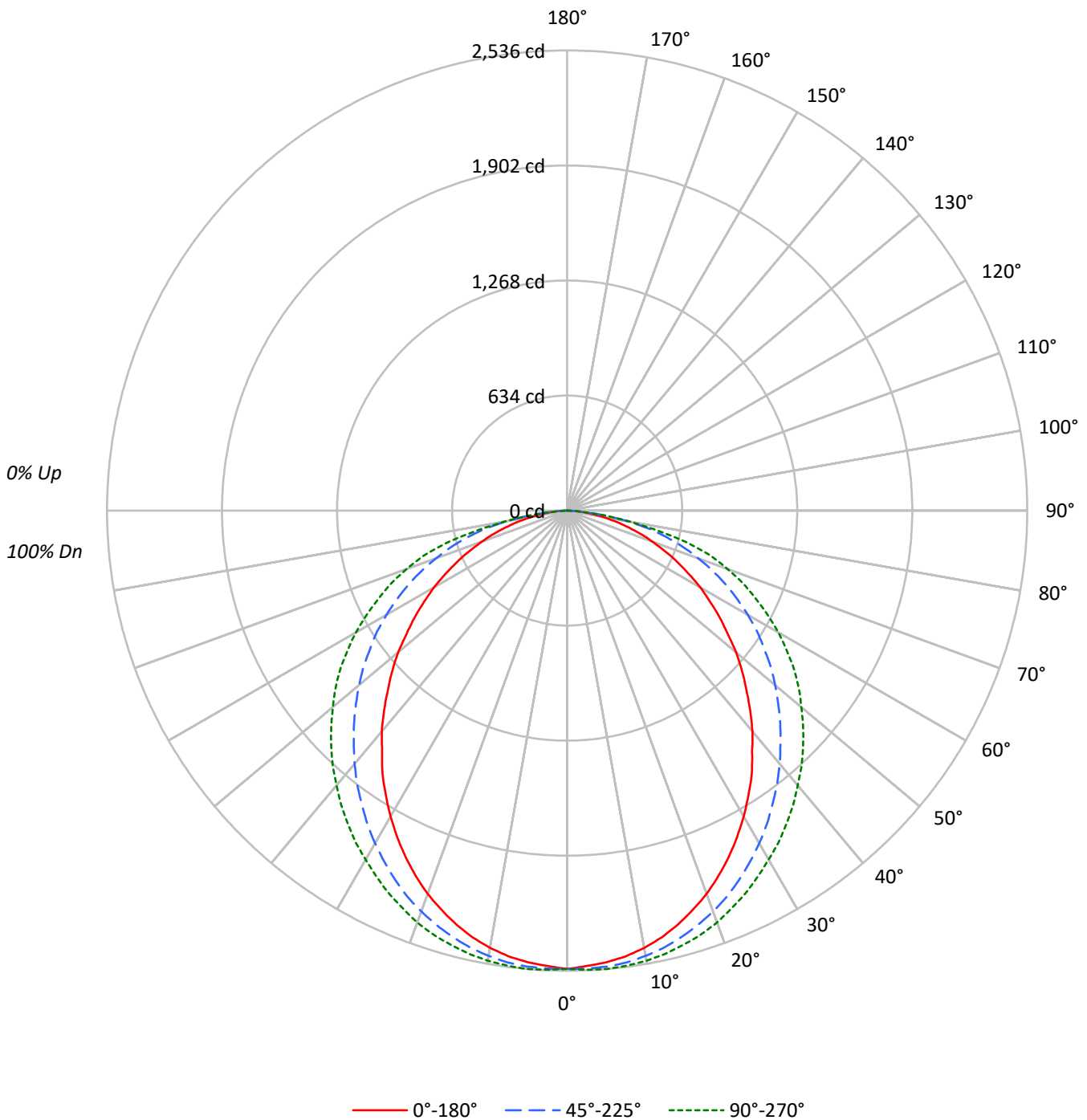
Input Watts (W): 68.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	0		
RW	70	50	30	10	70	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
1	109	104	99	95	106	101	97	94	97	94	91		93	91	88		90	87	85	83
2	99	90	83	77	96	88	82	76	85	79	75		81	77	73		78	75	71	69
3	90	79	71	64	87	77	70	63	74	68	62		72	66	61		69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53		64	57	52		61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46		57	50	45		55	49	45	43
6	70	56	47	41	68	55	47	40	53	46	40		52	45	40		50	44	39	37
7	64	51	42	36	63	50	42	36	48	41	35		47	40	35		46	39	35	33
8	60	46	38	32	58	46	37	32	44	37	32		43	36	31		42	36	31	29
9	56	43	34	29	55	42	34	29	41	34	28		40	33	28		39	33	28	26
10	53	39	31	26	51	39	31	26	38	31	26		37	30	26		36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6797	6797	6797
5°	6749	6814	6851
10°	6686	6808	6883
15°	6578	6778	6903
20°	6437	6732	6919
25°	6256	6664	6908
30°	6046	6579	6899
35°	5828	6482	6922
40°	5582	6401	6944
45°	5315	6321	7000
50°	5086	6264	7054
55°	4814	6215	7165
60°	4562	6187	7240
65°	4261	6140	7298
70°	3915	6048	7398
75°	3532	5887	7137
80°	3031	5212	5371
85°	2436	3072	2436



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	239.5	3.3
10°-20°	684.6	9.5
20°-30°	1028.3	14.2
30°-40°	1226.3	17.0
40°-50°	1267.9	17.5
50°-60°	1165.7	16.1
60°-70°	928.0	12.8
70°-80°	567.0	7.8
80°-90°	123.2	1.7
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°	1952.3	27.0
0°-40°	3178.6	44.0
0°-60°	5612.3	77.6
0°-90°	7230.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7230.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2526	2526	2526	2526	2526	
5°	2498	2505	2522	2533	2536	237
15°	2361	2388	2433	2467	2478	665
25°	2107	2159	2244	2306	2327	969
35°	1774	1850	1973	2076	2107	1107
45°	1397	1496	1661	1795	1839	1080
55°	1026	1139	1325	1476	1527	918
65°	669	782	964	1098	1146	663
75°	340	439	566	666	686	362
85°	79	96	100	86	79	91
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2525.8	2525.8	2525.8	2525.8	2525.8
2.5°	2512.1	2515.5	2525.8	2532.7	2532.7
5°	2498.3	2505.2	2522.4	2532.7	2536.1
7.5°	2477.7	2488.0	2512.1	2525.8	2529.2
10°	2446.9	2460.6	2491.5	2512.1	2518.9
12.5°	2409.1	2429.7	2467.4	2494.9	2501.8
15°	2361.1	2388.5	2433.1	2467.4	2477.7
17.5°	2306.2	2340.5	2395.4	2436.6	2450.3
20°	2247.8	2282.1	2350.8	2398.8	2416.0
22.5°	2179.2	2223.8	2302.7	2357.6	2371.4
25°	2107.1	2158.6	2244.4	2306.2	2326.7
27.5°	2028.2	2090.0	2182.6	2258.1	2275.3
30°	1945.8	2011.0	2117.4	2199.8	2220.4
32.5°	1860.0	1935.5	2048.8	2141.4	2168.9
35°	1774.2	1849.7	1973.3	2076.2	2107.1
37.5°	1674.7	1763.9	1901.2	2007.6	2045.3
40°	1588.9	1674.7	1822.3	1939.0	1976.7
42.5°	1492.8	1585.5	1739.9	1866.9	1911.5
45°	1396.7	1496.3	1661.0	1794.8	1839.4
47.5°	1307.5	1407.0	1578.6	1719.3	1763.9
50°	1214.8	1317.8	1496.3	1640.4	1685.0
52.5°	1115.3	1228.6	1413.9	1558.0	1609.5
55°	1026.1	1139.3	1324.7	1475.7	1527.1
57.5°	933.4	1050.1	1242.3	1386.4	1434.5
60°	847.6	960.9	1149.6	1290.3	1345.3
62.5°	755.0	871.7	1057.0	1194.3	1245.7
65°	669.2	782.4	964.3	1098.2	1146.2
67.5°	583.4	696.7	868.2	995.2	1050.1
70°	497.6	610.9	768.7	892.3	940.3
72.5°	422.1	521.6	672.6	785.9	830.5
75°	339.7	439.3	566.2	665.8	686.4
77.5°	264.2	353.5	459.9	504.5	511.3
80°	195.6	264.2	336.3	346.6	346.6
82.5°	130.4	181.9	209.3	212.8	209.3
85°	78.9	96.1	99.5	85.8	78.9
87.5°	27.5	27.5	17.2	10.3	3.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)