

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: P389451

Luminaire Tested: **22CZ2-85VHE-S-UNV-L940-CD1-SDWPD1-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: P389451  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-23)  
Test Lab: INNOVATIONS CENTER(G3)  
Issue Date: 2/28/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 22CZ2-85VHE-S-UNV-L940-CD1-SDWPD1-U  
Description: 2x2 CRUZE LED TROFFER WITH 4000K, 90 LEDS, AND SMOOTH LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 7544.5 lumens  
Efficiency: N/A  
Efficacy: 118.6 lumens/watt  
Spacing Criteria (0/90/45): 1.18 / 1.26 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

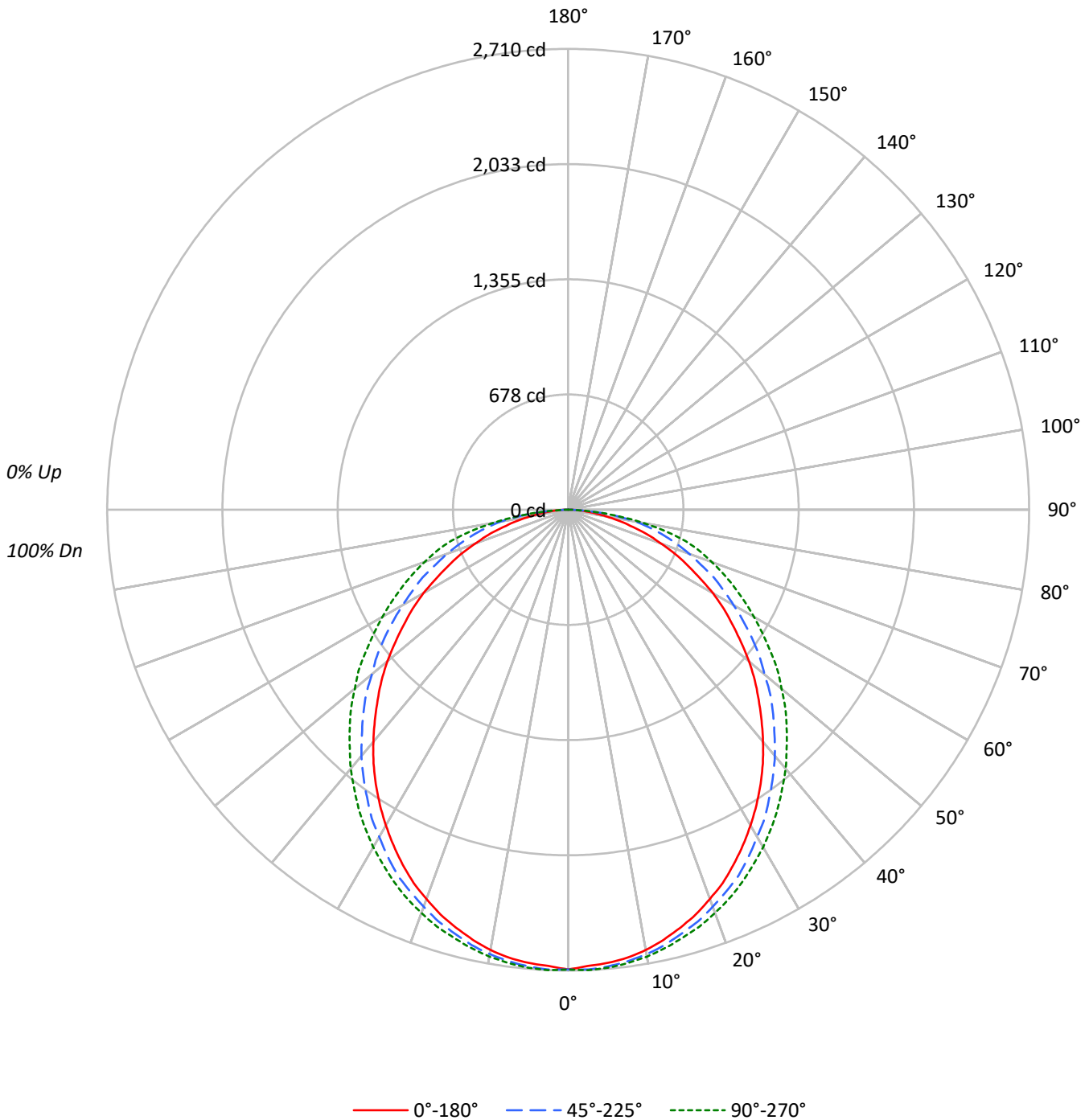
Input Watts (W): 63.6  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	108	103	99	95	106	101	97	94	97	94	91	93	90	88	89	87	85	83
2	98	90	83	77	96	88	82	76	84	79	74	81	77	73	78	74	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	69	60	54	66	59	53	64	57	52	61	56	52	49
5	75	62	53	47	73	61	53	46	59	52	46	57	51	45	55	50	45	43
6	70	56	47	41	68	55	47	41	53	46	40	52	45	40	50	44	39	37
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	33
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	31	30
9	56	43	35	29	55	42	34	29	41	34	29	40	33	29	39	33	28	27
10	53	40	32	26	51	39	31	26	38	31	26	37	31	26	36	30	26	24

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	7275	7275	7275
5°	7227	7284	7303
10°	7185	7252	7291
15°	7090	7188	7257
20°	6976	7117	7228
25°	6835	7044	7180
30°	6661	6902	7121
35°	6476	6776	7054
40°	6257	6640	6987
45°	6028	6484	6913
50°	5806	6307	6852
55°	5532	6193	6804
60°	5286	6043	6782
65°	4931	6007	6858
70°	4542	5954	7062
75°	4100	6039	7430
80°	3546	6219	6983
85°	2933	5218	5218



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	255.7	3.4
10°-20°	727.6	9.6
20°-30°	1088.6	14.4
30°-40°	1289.2	17.1
40°-50°	1313.8	17.4
50°-60°	1177.6	15.6
60°-70°	921.9	12.2
70°-80°	594.5	7.9
80°-90°	175.6	2.3
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°	2071.8	27.5
0°-40°	3361.0	44.5
0°-60°	5852.4	77.6
0°-90°	7544.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7544.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2703	2703	2703	2703	2703	
5°	2675	2682	2696	2700	2703	254
15°	2545	2559	2580	2601	2605	718
25°	2302	2323	2372	2404	2418	1060
35°	1971	1996	2063	2126	2147	1232
45°	1584	1619	1704	1792	1816	1223
55°	1179	1218	1320	1412	1450	1057
65°	774	820	943	1035	1077	769
75°	394	454	581	679	715	423
85°	95	130	169	169	169	112
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2703.4	2703.4	2703.4	2703.4	2703.4
2.5°	2685.8	2692.9	2706.9	2710.5	2710.5
5°	2675.3	2682.3	2696.4	2699.9	2703.4
7.5°	2657.7	2661.2	2678.8	2685.8	2689.3
10°	2629.5	2636.5	2654.1	2664.7	2668.2
12.5°	2590.8	2601.3	2622.5	2636.5	2640.1
15°	2545.0	2559.1	2580.2	2601.3	2604.9
17.5°	2495.7	2509.8	2538.0	2562.6	2569.7
20°	2435.9	2453.5	2485.2	2513.3	2523.9
22.5°	2376.1	2390.1	2428.9	2464.1	2474.6
25°	2302.1	2323.3	2372.5	2404.2	2418.3
27.5°	2224.7	2249.3	2298.6	2340.9	2354.9
30°	2143.7	2168.4	2221.2	2274.0	2291.6
32.5°	2059.3	2087.4	2150.8	2203.6	2221.2
35°	1971.3	1995.9	2062.8	2126.1	2147.3
37.5°	1879.7	1900.8	1978.3	2045.2	2066.3
40°	1781.2	1809.3	1890.3	1967.7	1988.9
42.5°	1682.6	1714.3	1795.2	1879.7	1900.8
45°	1584.0	1619.2	1703.7	1791.7	1816.4
47.5°	1489.0	1517.2	1612.2	1696.7	1731.9
50°	1386.9	1415.1	1506.6	1601.6	1636.8
52.5°	1281.3	1320.0	1418.6	1510.1	1552.4
55°	1179.2	1218.0	1320.0	1411.6	1450.3
57.5°	1084.2	1115.9	1221.5	1316.5	1355.2
60°	982.1	1010.3	1122.9	1225.0	1260.2
62.5°	873.0	915.2	1031.4	1126.4	1168.7
65°	774.4	820.2	943.4	1034.9	1077.1
67.5°	682.9	725.1	844.8	943.4	989.1
70°	577.3	633.6	756.8	855.4	897.6
72.5°	492.8	542.1	668.8	767.4	813.1
75°	394.3	454.1	580.8	679.4	714.6
77.5°	313.3	373.1	492.8	570.3	587.9
80°	228.8	288.6	401.3	440.0	450.6
82.5°	154.9	211.2	288.6	299.2	302.7
85°	95.0	130.2	169.0	169.0	169.0
87.5°	45.8	52.8	59.8	56.3	56.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)