

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: P388226

Luminaire Tested: **22CZ2-85VHE-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: P388226  
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: 22CZ2-85VHE-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: 6826.4 lumens  
Efficiency: N/A  
Efficacy: 107.3 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

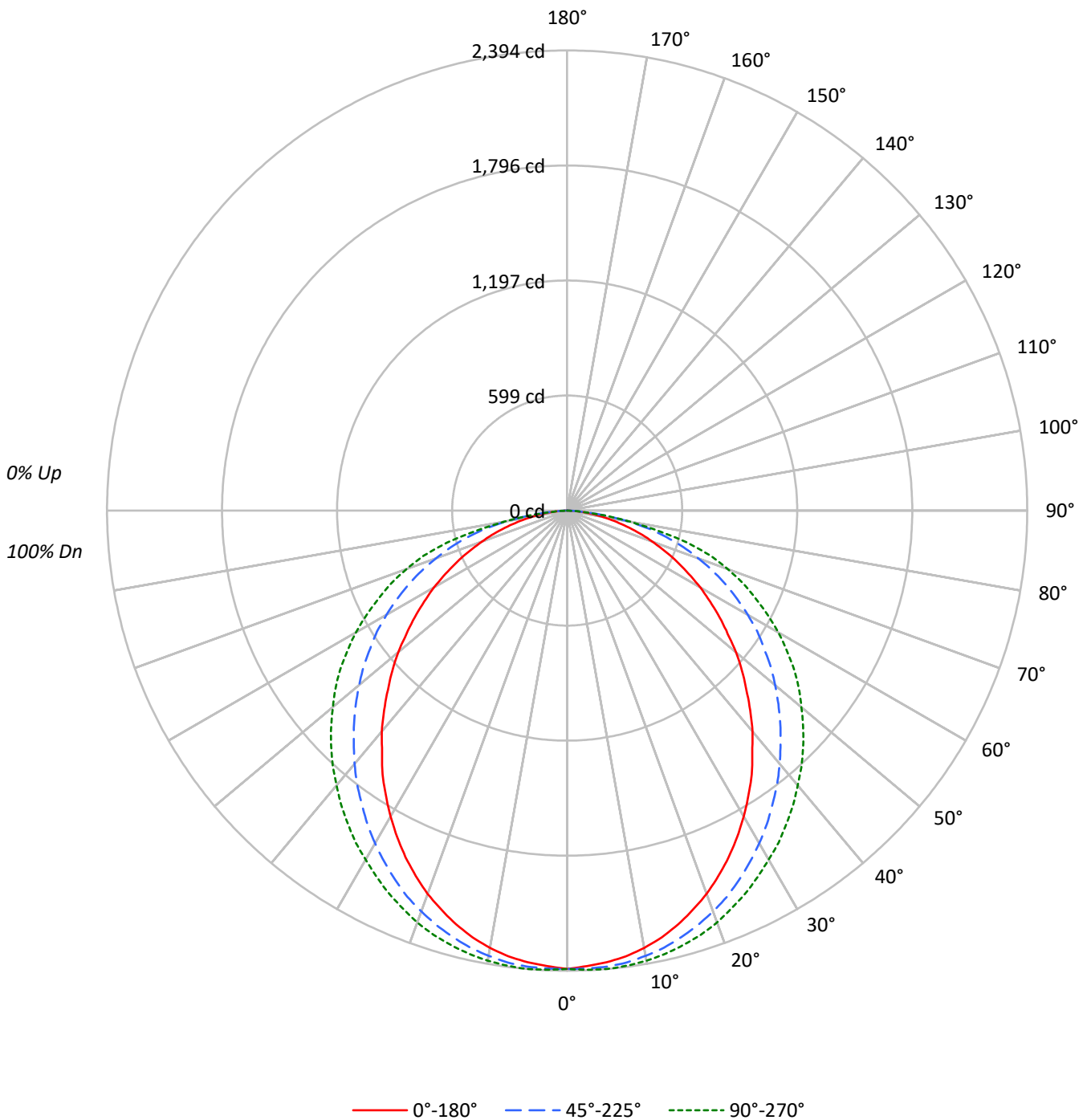
Input Watts (W): 63.6  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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°	6417	6417	6417
5°	6371	6433	6468
10°	6312	6427	6498
15°	6210	6400	6517
20°	6077	6356	6532
25°	5907	6291	6522
30°	5708	6212	6514
35°	5503	6120	6535
40°	5270	6043	6556
45°	5018	5968	6609
50°	4802	5914	6660
55°	4545	5867	6764
60°	4307	5842	6836
65°	4023	5797	6891
70°	3696	5711	6985
75°	3335	5558	6737
80°	2862	4920	5071
85°	2300	2902	2300



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	226.1	3.3
10°-20°	646.3	9.5
20°-30°	970.8	14.2
30°-40°	1157.8	17.0
40°-50°	1197.1	17.5
50°-60°	1100.6	16.1
60°-70°	876.1	12.8
70°-80°	535.3	7.8
80°-90°	116.3	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°	1843.2	27.0
0°-40°	3001.0	44.0
0°-60°	5298.6	77.6
0°-90°	6826.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6826.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2385	2385	2385	2385	2385	
5°	2359	2365	2381	2391	2394	224
15°	2229	2255	2297	2330	2339	628
25°	1989	2038	2119	2177	2197	915
35°	1675	1746	1863	1960	1989	1045
45°	1319	1413	1568	1694	1737	1020
55°	969	1076	1251	1393	1442	867
65°	632	739	910	1037	1082	626
75°	321	415	535	629	648	342
85°	74	91	94	81	74	86
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2384.6	2384.6	2384.6	2384.6	2384.6
2.5°	2371.7	2374.9	2384.6	2391.1	2391.1
5°	2358.7	2365.2	2381.4	2391.1	2394.3
7.5°	2339.3	2349.0	2371.7	2384.6	2387.9
10°	2310.1	2323.1	2352.2	2371.7	2378.1
12.5°	2274.5	2293.9	2329.5	2355.5	2361.9
15°	2229.1	2255.0	2297.1	2329.5	2339.3
17.5°	2177.3	2209.7	2261.5	2300.4	2313.3
20°	2122.2	2154.6	2219.4	2264.7	2280.9
22.5°	2057.4	2099.5	2174.0	2225.9	2238.8
25°	1989.3	2037.9	2118.9	2177.3	2196.7
27.5°	1914.8	1973.1	2060.6	2131.9	2148.1
30°	1837.1	1898.6	1999.1	2076.8	2096.3
32.5°	1756.1	1827.3	1934.3	2021.7	2047.7
35°	1675.1	1746.3	1863.0	1960.2	1989.3
37.5°	1581.1	1665.4	1794.9	1895.4	1931.0
40°	1500.1	1581.1	1720.4	1830.6	1866.2
42.5°	1409.4	1496.9	1642.7	1762.5	1804.7
45°	1318.7	1412.6	1568.2	1694.5	1736.6
47.5°	1234.4	1328.4	1490.4	1623.2	1665.4
50°	1147.0	1244.2	1412.6	1548.7	1590.8
52.5°	1053.0	1159.9	1334.9	1471.0	1519.6
55°	968.8	1075.7	1250.6	1393.2	1441.8
57.5°	881.3	991.4	1172.9	1309.0	1354.3
60°	800.3	907.2	1085.4	1218.2	1270.1
62.5°	712.8	823.0	997.9	1127.5	1176.1
65°	631.8	738.7	910.4	1036.8	1082.2
67.5°	550.8	657.7	819.7	939.6	991.4
70°	469.8	576.7	725.8	842.4	887.8
72.5°	398.5	492.5	635.0	742.0	784.1
75°	320.8	414.7	534.6	628.6	648.0
77.5°	249.5	333.7	434.2	476.3	482.8
80°	184.7	249.5	317.5	327.2	327.2
82.5°	123.1	171.7	197.6	200.9	197.6
85°	74.5	90.7	94.0	81.0	74.5
87.5°	25.9	25.9	16.2	9.7	3.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)