

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: P388229

Luminaire Tested: **22CZ2-85VHE-SQR-UNV-L935-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: P388229  
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-L935-CD1-U  
Description: 2x2 CRUZE LED TROFFER WITH 3500K, 90 LEDS, AND SQUARE LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6995.2 lumens  
Efficiency: N/A  
Efficacy: 110.0 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

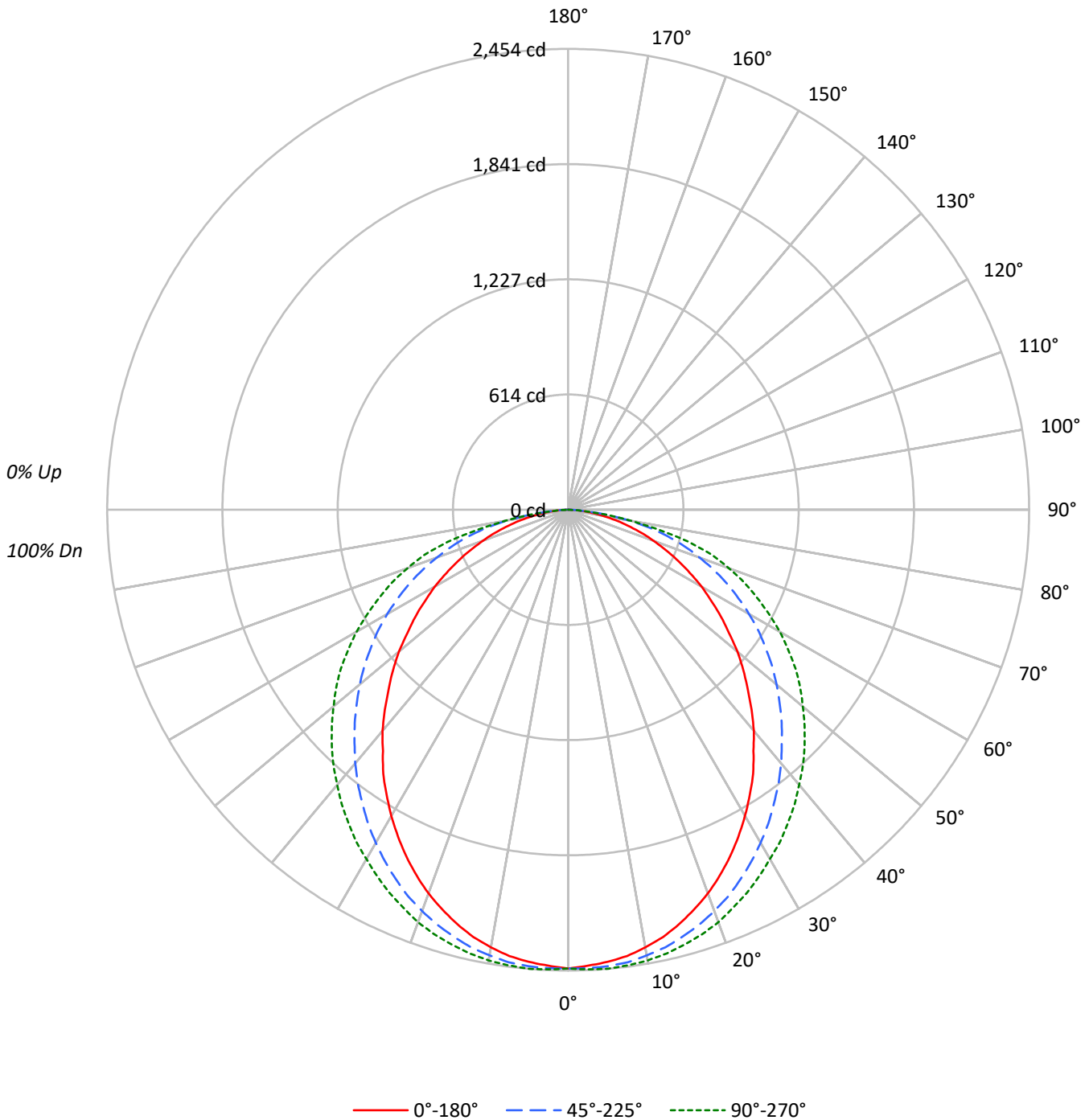
Input Watts (W): 63.6  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	6576	6576	6576
5°	6529	6592	6628
10°	6468	6586	6659
15°	6364	6558	6678
20°	6228	6513	6693
25°	6053	6447	6684
30°	5849	6365	6675
35°	5639	6272	6697
40°	5400	6193	6718
45°	5143	6115	6772
50°	4920	6060	6825
55°	4657	6013	6931
60°	4414	5986	7005
65°	4122	5940	7061
70°	3788	5851	7157
75°	3418	5696	6904
80°	2932	5043	5196
85°	2359	2973	2359



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	231.7	3.3
10°-20°	662.3	9.5
20°-30°	994.8	14.2
30°-40°	1186.4	17.0
40°-50°	1226.7	17.5
50°-60°	1127.8	16.1
60°-70°	897.8	12.8
70°-80°	548.5	7.8
80°-90°	119.2	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°	1888.8	27.0
0°-40°	3075.2	44.0
0°-60°	5429.6	77.6
0°-90°	6995.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6995.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2444	2444	2444	2444	2444	
5°	2417	2424	2440	2450	2454	229
15°	2284	2311	2354	2387	2397	643
25°	2038	2088	2171	2231	2251	938
35°	1716	1790	1909	2009	2038	1071
45°	1351	1448	1607	1736	1780	1045
55°	993	1102	1282	1428	1477	888
65°	647	757	933	1062	1109	641
75°	329	425	548	644	664	350
85°	76	93	96	83	76	88
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2443.6	2443.6	2443.6	2443.6	2443.6
2.5°	2430.3	2433.6	2443.6	2450.2	2450.2
5°	2417.0	2423.7	2440.3	2450.2	2453.6
7.5°	2397.1	2407.1	2430.3	2443.6	2446.9
10°	2367.2	2380.5	2410.4	2430.3	2437.0
12.5°	2330.7	2350.6	2387.2	2413.7	2420.4
15°	2284.2	2310.8	2353.9	2387.2	2397.1
17.5°	2231.1	2264.3	2317.4	2357.3	2370.5
20°	2174.7	2207.9	2274.3	2320.7	2337.3
22.5°	2108.3	2151.4	2227.8	2280.9	2294.2
25°	2038.5	2088.3	2171.3	2231.1	2251.0
27.5°	1962.2	2021.9	2111.6	2184.6	2201.2
30°	1882.5	1945.6	2048.5	2128.2	2148.1
32.5°	1799.5	1872.5	1982.1	2071.7	2098.3
35°	1716.5	1789.5	1909.1	2008.7	2038.5
37.5°	1620.2	1706.5	1839.3	1942.3	1978.8
40°	1537.2	1620.2	1763.0	1875.9	1912.4
42.5°	1444.2	1533.9	1683.3	1806.1	1849.3
45°	1351.3	1447.6	1606.9	1736.4	1779.6
47.5°	1265.0	1361.2	1527.2	1663.4	1706.5
50°	1175.3	1274.9	1447.6	1587.0	1630.2
52.5°	1079.0	1188.6	1367.9	1507.3	1557.1
55°	992.7	1102.3	1281.6	1427.6	1477.4
57.5°	903.1	1015.9	1201.9	1341.3	1387.8
60°	820.1	929.6	1112.2	1248.4	1301.5
62.5°	730.4	843.3	1022.6	1155.4	1205.2
65°	647.4	757.0	932.9	1062.4	1108.9
67.5°	564.4	674.0	840.0	962.8	1015.9
70°	481.4	591.0	743.7	863.2	909.7
72.5°	408.4	504.7	650.7	760.3	803.5
75°	328.7	425.0	547.8	644.1	664.0
77.5°	255.6	342.0	444.9	488.1	494.7
80°	189.2	255.6	325.4	335.3	335.3
82.5°	126.2	176.0	202.5	205.8	202.5
85°	76.4	93.0	96.3	83.0	76.4
87.5°	26.6	26.6	16.6	10.0	3.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)