

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: P388228

Luminaire Tested: **22CZ2-85VHE-SQR-UNV-L935-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: P388228  
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-SWPD1-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: 6908.5 lumens  
Efficiency: N/A  
Efficacy: 108.6 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

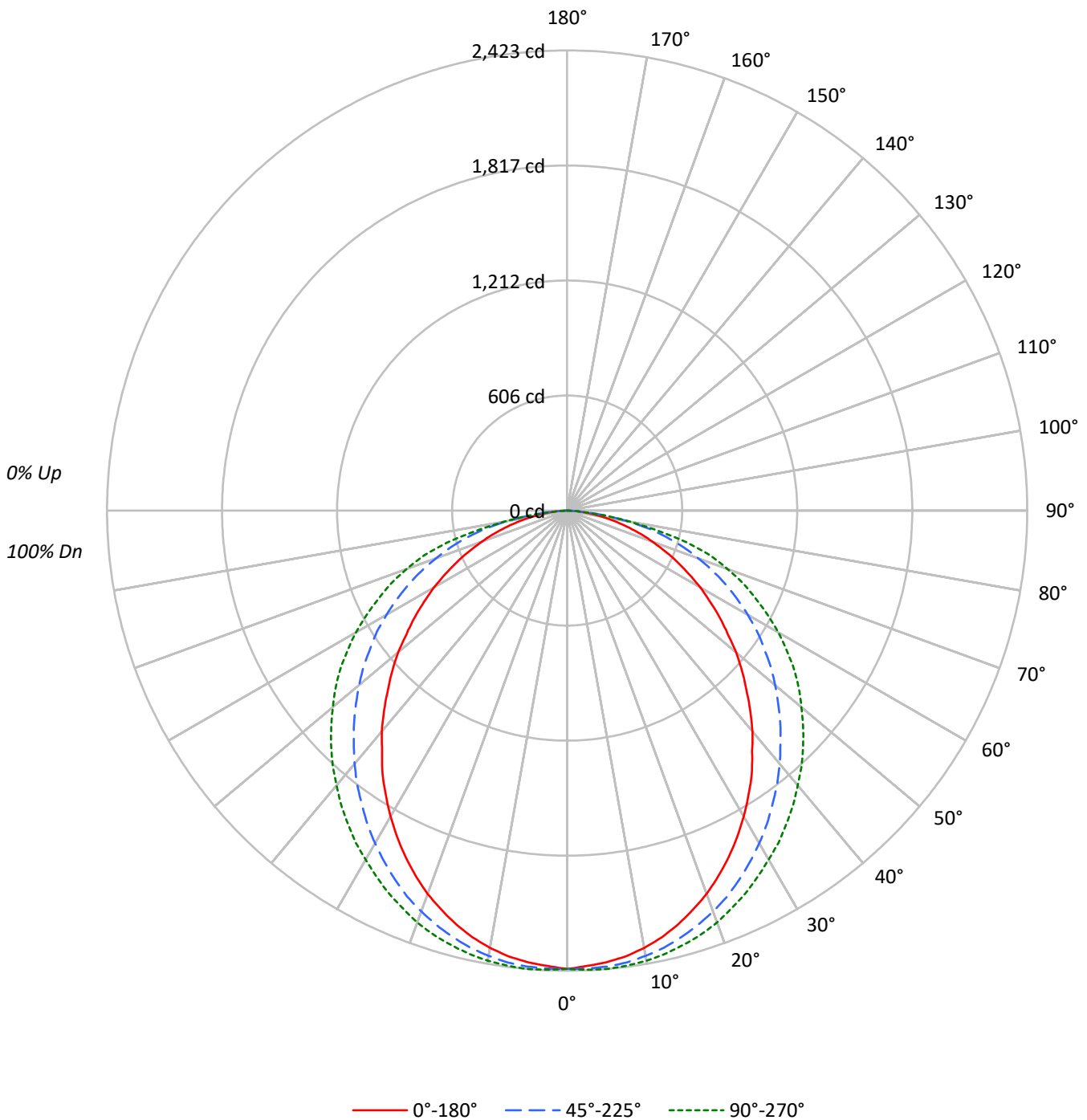
Input Watts (W): 63.6  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	6494	6494	6494
5°	6448	6510	6545
10°	6388	6505	6576
15°	6285	6477	6595
20°	6150	6432	6611
25°	5978	6367	6601
30°	5777	6286	6592
35°	5569	6194	6614
40°	5333	6116	6635
45°	5079	6040	6688
50°	4859	5985	6740
55°	4600	5938	6845
60°	4359	5912	6917
65°	4071	5867	6974
70°	3740	5779	7069
75°	3375	5625	6818
80°	2896	4979	5133
85°	2328	2936	2328



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	228.8	3.3
10°-20°	654.1	9.5
20°-30°	982.5	14.2
30°-40°	1171.7	17.0
40°-50°	1211.5	17.5
50°-60°	1113.8	16.1
60°-70°	886.7	12.8
70°-80°	541.7	7.8
80°-90°	117.7	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°	1865.4	27.0
0°-40°	3037.1	44.0
0°-60°	5362.3	77.6
0°-90°	6908.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6908.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2413	2413	2413	2413	2413	
5°	2387	2394	2410	2420	2423	226
15°	2256	2282	2325	2358	2367	635
25°	2013	2062	2144	2204	2223	926
35°	1695	1767	1885	1984	2013	1058
45°	1334	1430	1587	1715	1758	1032
55°	980	1089	1266	1410	1459	877
65°	639	748	921	1049	1095	633
75°	325	420	541	636	656	346
85°	75	92	95	82	75	87
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2413.3	2413.3	2413.3	2413.3	2413.3
2.5°	2400.2	2403.5	2413.3	2419.9	2419.9
5°	2387.1	2393.6	2410.0	2419.9	2423.1
7.5°	2367.4	2377.2	2400.2	2413.3	2416.6
10°	2337.9	2351.0	2380.5	2400.2	2406.7
12.5°	2301.8	2321.5	2357.6	2383.8	2390.4
15°	2255.9	2282.1	2324.8	2357.6	2367.4
17.5°	2203.5	2236.2	2288.7	2328.1	2341.2
20°	2147.7	2180.5	2246.1	2292.0	2308.4
22.5°	2082.1	2124.8	2200.2	2252.6	2265.8
25°	2013.3	2062.5	2144.4	2203.5	2223.1
27.5°	1937.9	1996.9	2085.4	2157.5	2173.9
30°	1859.2	1921.5	2023.1	2101.8	2121.5
32.5°	1777.2	1849.3	1957.5	2046.1	2072.3
35°	1695.2	1767.4	1885.4	1983.8	2013.3
37.5°	1600.1	1685.4	1816.5	1918.2	1954.3
40°	1518.2	1600.1	1741.1	1852.6	1888.7
42.5°	1426.3	1514.9	1662.4	1783.7	1826.4
45°	1334.5	1429.6	1587.0	1714.9	1757.5
47.5°	1249.3	1344.4	1508.3	1642.8	1685.4
50°	1160.7	1259.1	1429.6	1567.3	1610.0
52.5°	1065.7	1173.9	1350.9	1488.6	1537.8
55°	980.4	1088.6	1265.7	1409.9	1459.1
57.5°	891.9	1003.4	1187.0	1324.7	1370.6
60°	809.9	918.1	1098.4	1232.9	1285.3
62.5°	721.4	832.9	1009.9	1141.1	1190.3
65°	639.4	747.6	921.4	1049.3	1095.2
67.5°	557.4	665.6	829.6	950.9	1003.4
70°	475.4	583.7	734.5	852.5	898.4
72.5°	403.3	498.4	642.7	750.9	793.5
75°	324.6	419.7	541.0	636.1	655.8
77.5°	252.5	337.7	439.4	482.0	488.6
80°	186.9	252.5	321.3	331.2	331.2
82.5°	124.6	173.8	200.0	203.3	200.0
85°	75.4	91.8	95.1	82.0	75.4
87.5°	26.2	26.2	16.4	9.8	3.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)