

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: P388231

Luminaire Tested: **22CZ2-85VHE-SQR-UNV-L940-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: P388231  
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-L940-CD1-SWPD1-U  
Description: 2x2 CRUZE LED TROFFER WITH 4000K, 90 LEDS, AND SQUARE LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6979.9 lumens  
Efficiency: N/A  
Efficacy: 109.7 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

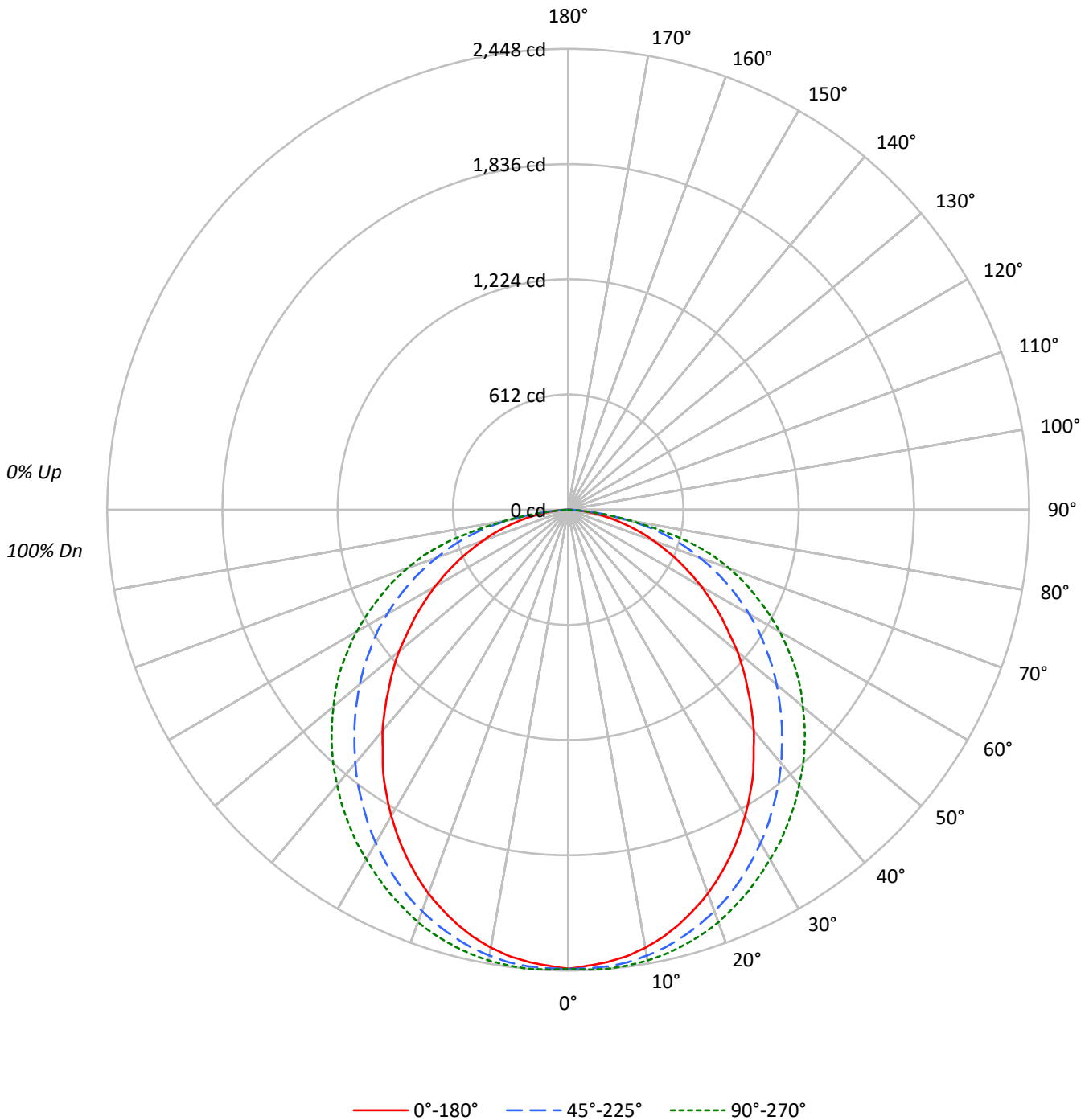
Input Watts (W): 63.6  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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					100			
1	109	104	99	95	106	101	97	94	97	94	91	93	91	88	90	87	85	83					83			
2	99	90	83	77	96	88	82	76	85	79	75	81	77	73	78	75	71	69					69			
3	90	79	71	64	87	77	70	63	74	68	62	72	66	61	69	64	60	58					58			
4	82	70	61	54	80	68	60	54	66	59	53	64	57	52	61	56	51	49					49			
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	43					43			
6	70	56	47	41	68	55	47	40	53	46	40	52	45	40	50	44	39	37					37			
7	64	51	42	36	63	50	42	36	48	41	35	47	40	35	46	39	35	33					33			
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29					29			
9	56	43	34	29	55	42	34	29	41	34	28	40	33	28	39	33	28	26					26			
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24					24			

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

	0°	45°	90°
0°	6561	6561	6561
5°	6515	6577	6613
10°	6454	6572	6644
15°	6350	6544	6664
20°	6214	6499	6679
25°	6040	6433	6669
30°	5837	6351	6660
35°	5626	6258	6682
40°	5388	6179	6703
45°	5131	6102	6758
50°	4909	6047	6810
55°	4647	6000	6916
60°	4404	5973	6989
65°	4113	5927	7046
70°	3780	5839	7142
75°	3410	5683	6889
80°	2926	5032	5185
85°	2353	2967	2353



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	231.2	3.3
10°-20°	660.9	9.5
20°-30°	992.6	14.2
30°-40°	1183.8	17.0
40°-50°	1224.0	17.5
50°-60°	1125.3	16.1
60°-70°	895.9	12.8
70°-80°	547.3	7.8
80°-90°	119.0	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°	1884.6	27.0
0°-40°	3068.5	44.0
0°-60°	5417.8	77.6
0°-90°	6979.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6979.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2438	2438	2438	2438	2438	
5°	2412	2418	2435	2445	2448	229
15°	2279	2306	2349	2382	2392	642
25°	2034	2084	2167	2226	2246	936
35°	1713	1786	1905	2004	2034	1069
45°	1348	1444	1603	1733	1776	1043
55°	990	1100	1279	1424	1474	886
65°	646	755	931	1060	1106	640
75°	328	424	547	643	663	349
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°	2438.2	2438.2	2438.2	2438.2	2438.2
2.5°	2425.0	2428.3	2438.2	2444.9	2444.9
5°	2411.7	2418.4	2434.9	2444.9	2448.2
7.5°	2391.9	2401.8	2425.0	2438.2	2441.6
10°	2362.1	2375.3	2405.1	2425.0	2431.6
12.5°	2325.6	2345.5	2381.9	2408.4	2415.1
15°	2279.2	2305.7	2348.8	2381.9	2391.9
17.5°	2226.2	2259.4	2312.4	2352.1	2365.4
20°	2169.9	2203.0	2269.3	2315.7	2332.2
22.5°	2103.7	2146.7	2222.9	2275.9	2289.2
25°	2034.1	2083.8	2166.6	2226.2	2246.1
27.5°	1957.9	2017.5	2107.0	2179.8	2196.4
30°	1878.4	1941.3	2044.0	2123.5	2143.4
32.5°	1795.6	1868.4	1977.8	2067.2	2093.7
35°	1712.7	1785.6	1904.9	2004.3	2034.1
37.5°	1616.7	1702.8	1835.3	1938.0	1974.5
40°	1533.8	1616.7	1759.1	1871.8	1908.2
42.5°	1441.1	1530.5	1679.6	1802.2	1845.2
45°	1348.3	1444.4	1603.4	1732.6	1775.7
47.5°	1262.2	1358.3	1523.9	1659.7	1702.8
50°	1172.7	1272.1	1444.4	1583.5	1626.6
52.5°	1076.7	1186.0	1364.9	1504.0	1553.7
55°	990.5	1099.9	1278.8	1424.5	1474.2
57.5°	901.1	1013.7	1199.2	1338.4	1384.8
60°	818.3	927.6	1109.8	1245.6	1298.6
62.5°	728.8	841.5	1020.4	1152.9	1202.6
65°	646.0	755.3	930.9	1060.1	1106.5
67.5°	563.2	672.5	838.1	960.7	1013.7
70°	480.4	589.7	742.1	861.3	907.7
72.5°	407.5	503.6	649.3	758.6	801.7
75°	328.0	424.0	546.6	642.7	662.6
77.5°	255.1	341.2	443.9	487.0	493.6
80°	188.8	255.1	324.7	334.6	334.6
82.5°	125.9	175.6	202.1	205.4	202.1
85°	76.2	92.8	96.1	82.8	76.2
87.5°	26.5	26.5	16.6	9.9	3.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)