

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: P389421

Luminaire Tested: **22CZ2-80VHE-S-UNV-L930-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: P389421  
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: 22CZ2-80VHE-S-UNV-L930-CD1-SDWPD1-U  
Description: 2x2 CRUZE LED TROFFER WITH 3000K, 90 LEDS, AND SMOOTH LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6844.6 lumens  
Efficiency: N/A  
Efficacy: 115.8 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

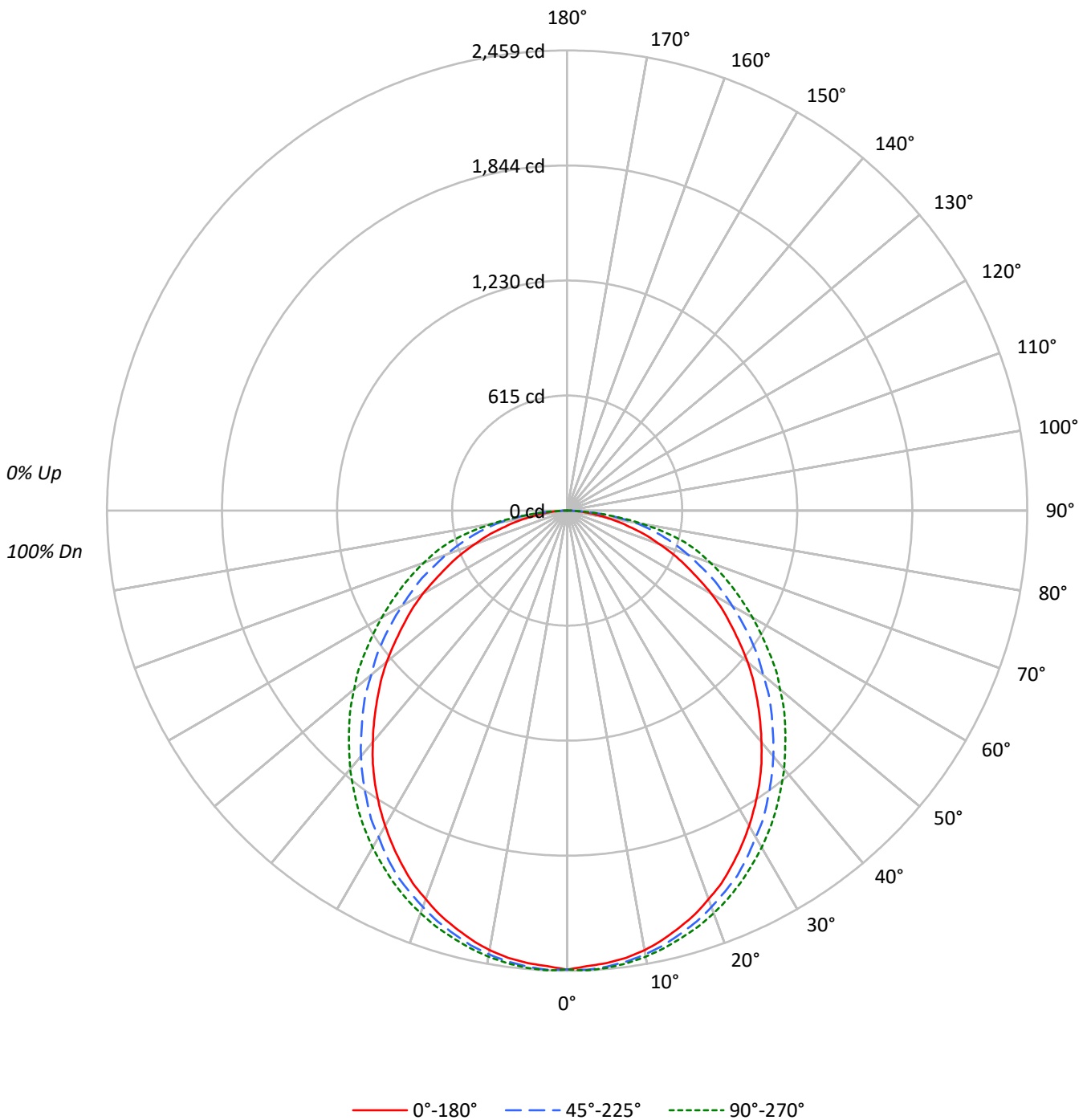
Input Watts (W): 59.1  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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

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

	0°	45°	90°
0°	6600	6600	6600
5°	6556	6608	6625
10°	6519	6580	6615
15°	6432	6522	6584
20°	6328	6456	6557
25°	6201	6391	6514
30°	6043	6261	6460
35°	5875	6148	6400
40°	5676	6024	6338
45°	5469	5882	6271
50°	5268	5722	6217
55°	5019	5619	6173
60°	4795	5483	6153
65°	4474	5450	6222
70°	4120	5402	6408
75°	3719	5478	6740
80°	3217	5642	6335
85°	2661	4733	4733



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	231.9	3.4
10°-20°	660.1	9.6
20°-30°	987.6	14.4
30°-40°	1169.6	17.1
40°-50°	1192.0	17.4
50°-60°	1068.3	15.6
60°-70°	836.4	12.2
70°-80°	539.4	7.9
80°-90°	159.3	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°	1879.6	27.5
0°-40°	3049.2	44.5
0°-60°	5309.5	77.6
0°-90°	6844.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6844.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2453	2453	2453	2453	2453	
5°	2427	2434	2446	2449	2453	230
15°	2309	2322	2341	2360	2363	651
25°	2089	2108	2152	2181	2194	961
35°	1788	1811	1871	1929	1948	1118
45°	1437	1469	1546	1626	1648	1110
55°	1070	1105	1198	1281	1316	959
65°	703	744	856	939	977	698
75°	358	412	527	616	648	383
85°	86	118	153	153	153	101
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2452.6	2452.6	2452.6	2452.6	2452.6
2.5°	2436.7	2443.1	2455.8	2459.0	2459.0
5°	2427.1	2433.5	2446.2	2449.4	2452.6
7.5°	2411.1	2414.3	2430.3	2436.7	2439.9
10°	2385.6	2392.0	2407.9	2417.5	2420.7
12.5°	2350.4	2360.0	2379.2	2392.0	2395.1
15°	2308.9	2321.7	2340.9	2360.0	2363.2
17.5°	2264.2	2277.0	2302.5	2324.9	2331.3
20°	2209.9	2225.9	2254.6	2280.2	2289.8
22.5°	2155.6	2168.4	2203.5	2235.5	2245.1
25°	2088.6	2107.7	2152.4	2181.2	2194.0
27.5°	2018.3	2040.7	2085.4	2123.7	2136.5
30°	1944.9	1967.2	2015.1	2063.0	2079.0
32.5°	1868.2	1893.8	1951.2	1999.2	2015.1
35°	1788.4	1810.7	1871.4	1928.9	1948.1
37.5°	1705.3	1724.5	1794.8	1855.4	1874.6
40°	1615.9	1641.5	1714.9	1785.2	1804.3
42.5°	1526.5	1555.3	1628.7	1705.3	1724.5
45°	1437.1	1469.0	1545.7	1625.5	1647.9
47.5°	1350.9	1376.4	1462.6	1539.3	1571.2
50°	1258.3	1283.8	1366.8	1453.1	1485.0
52.5°	1162.4	1197.6	1287.0	1370.0	1408.3
55°	1069.8	1105.0	1197.6	1280.6	1315.7
57.5°	983.6	1012.4	1108.2	1194.4	1229.5
60°	891.0	916.5	1018.7	1111.3	1143.3
62.5°	792.0	830.3	935.7	1021.9	1060.3
65°	702.6	744.1	855.9	938.9	977.2
67.5°	619.5	657.9	766.4	855.9	897.4
70°	523.7	574.8	686.6	776.0	814.4
72.5°	447.1	491.8	606.8	696.2	737.7
75°	357.7	412.0	526.9	616.4	648.3
77.5°	284.2	338.5	447.1	517.4	533.3
80°	207.6	261.9	364.1	399.2	408.8
82.5°	140.5	191.6	261.9	271.5	274.6
85°	86.2	118.2	153.3	153.3	153.3
87.5°	41.5	47.9	54.3	51.1	51.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)