

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: P388442

Luminaire Tested: **22CZ2-70VHE-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: P388442  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-27)  
Test Lab: INNOVATIONS CENTER(G3)  
Issue Date: 2/28/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 22CZ2-70VHE-UNV-L935-CD1-U  
Description: 2x2 CRUZE LED TROFFER WITH 3500K, 90 LEDS, AND RIBBED LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

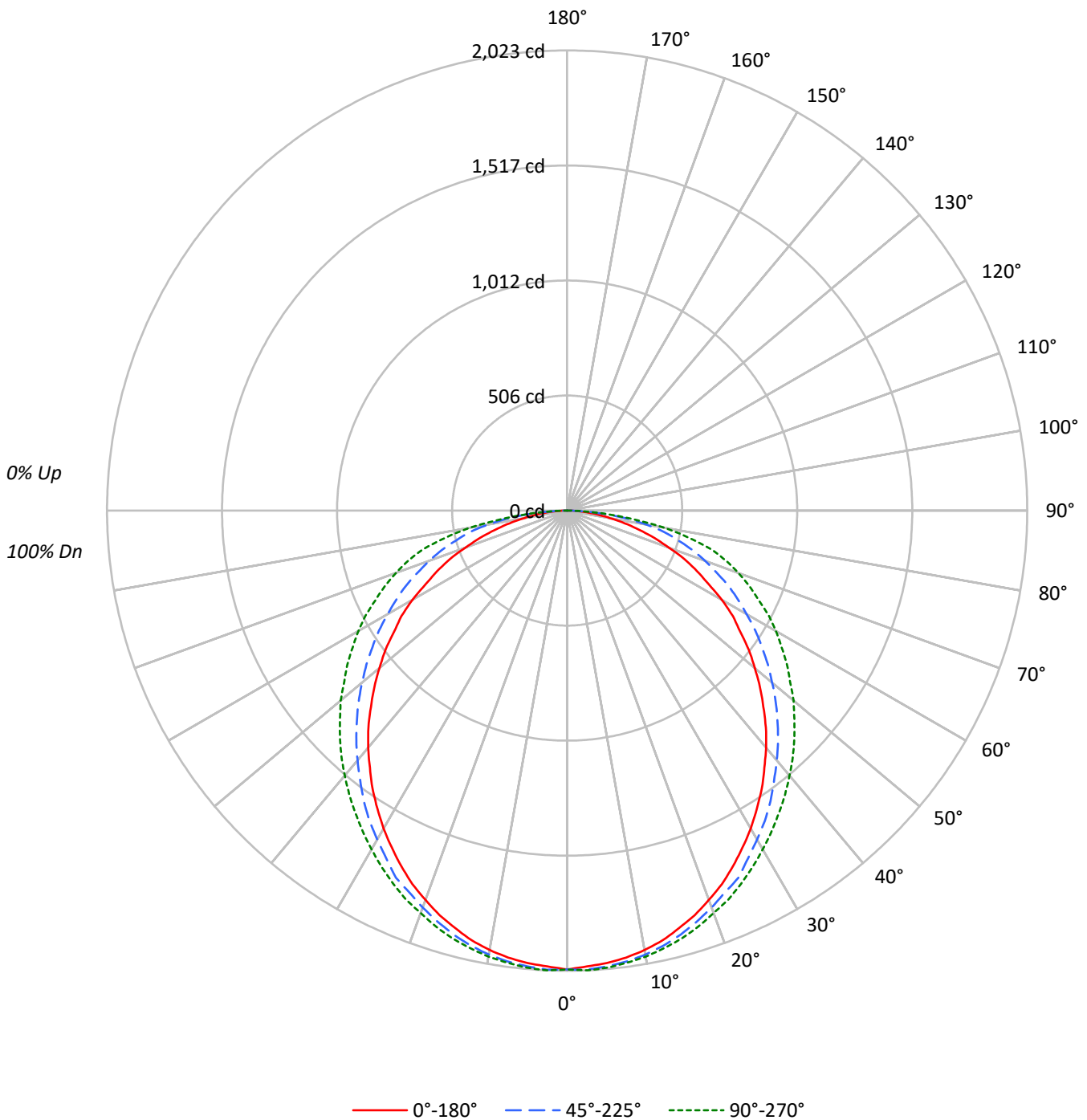
Lumens per Lamp: N/A  
Luminaire Lumens: 5932.7 lumens  
Efficiency: N/A  
Efficacy: 117.9 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.27 / 1.36  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

Input Watts (W): 50.3  
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	108	103	98	94	105	101	96	93	96	93	90		92	90	87		89	86	84	82
2	98	89	82	76	95	87	81	75	84	78	73		80	76	71		77	73	70	68
3	89	78	69	63	86	76	68	62	73	66	61		70	65	60		68	63	59	56
4	81	69	60	53	79	67	59	52	65	57	52		63	56	51		60	55	50	48
5	75	61	52	45	72	60	52	45	58	50	44		56	49	44		54	48	44	41
6	69	55	46	39	67	54	46	39	52	45	39		51	44	39		49	43	38	36
7	64	50	41	35	62	49	41	35	48	40	34		46	39	34		45	39	34	32
8	59	46	37	31	58	45	37	31	44	36	31		42	35	30		41	35	30	28
9	56	42	34	28	54	41	33	28	40	33	28		39	32	27		38	32	27	25
10	52	39	31	25	51	38	30	25	37	30	25		36	30	25		35	29	25	23

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

	0°	45°	90°
0°	5428	5428	5428
5°	5394	5433	5449
10°	5361	5416	5440
15°	5295	5376	5425
20°	5216	5317	5392
25°	5123	5287	5374
30°	5016	5189	5343
35°	4901	5121	5332
40°	4779	5035	5343
45°	4644	4977	5377
50°	4510	4925	5439
55°	4355	4903	5533
60°	4226	4902	5703
65°	4015	4982	5911
70°	3744	5076	6294
75°	3430	5251	6799
80°	2986	5473	6696
85°	2615	4866	5317



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	190.8	3.2
10°-20°	543.4	9.2
20°-30°	815.7	13.7
30°-40°	974.7	16.4
40°-50°	1013.6	17.1
50°-60°	939.4	15.8
60°-70°	770.5	13.0
70°-80°	520.9	8.8
80°-90°	163.7	2.8
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°	1549.9	26.1
0°-40°	2524.6	42.6
0°-60°	4477.6	75.5
0°-90°	5932.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5932.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2017	2017	2017	2017	2017	
5°	1997	2000	2011	2014	2017	190
15°	1900	1909	1930	1941	1947	536
25°	1725	1740	1781	1801	1810	795
35°	1492	1512	1559	1606	1623	932
45°	1220	1244	1308	1384	1413	942
55°	928	958	1045	1138	1179	834
65°	631	666	782	884	928	623
75°	330	385	505	607	654	350
85°	85	117	158	175	172	96
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2017.2	2017.2	2017.2	2017.2	2017.2
2.5°	2005.6	2011.4	2020.1	2023.1	2023.1
5°	1996.8	1999.7	2011.4	2014.3	2017.2
7.5°	1982.2	1988.0	1999.7	2002.6	2005.6
10°	1961.8	1967.6	1982.2	1988.0	1991.0
12.5°	1935.5	1941.3	1958.8	1967.6	1970.5
15°	1900.5	1909.2	1929.6	1941.3	1947.2
17.5°	1865.4	1874.2	1894.6	1912.1	1918.0
20°	1821.6	1842.1	1856.7	1880.0	1882.9
22.5°	1777.8	1789.5	1815.8	1839.2	1850.8
25°	1725.3	1739.9	1780.8	1801.2	1810.0
27.5°	1669.8	1690.3	1722.4	1754.5	1766.2
30°	1614.4	1629.0	1669.8	1707.8	1719.5
32.5°	1553.1	1573.5	1617.3	1655.2	1672.8
35°	1491.8	1512.2	1558.9	1605.6	1623.1
37.5°	1424.6	1448.0	1494.7	1550.1	1573.5
40°	1360.4	1377.9	1433.4	1500.5	1520.9
42.5°	1293.2	1313.7	1372.1	1445.0	1468.4
45°	1220.3	1243.6	1307.8	1383.7	1412.9
47.5°	1150.2	1173.6	1243.6	1319.5	1354.5
50°	1077.2	1106.4	1176.5	1264.1	1299.1
52.5°	1007.2	1033.4	1112.2	1202.7	1234.9
55°	928.3	957.5	1045.1	1138.5	1179.4
57.5°	864.1	884.5	980.9	1077.2	1118.1
60°	785.3	811.6	910.8	1013.0	1059.7
62.5°	700.6	744.4	846.6	951.7	998.4
65°	630.6	665.6	782.4	884.5	928.3
67.5°	557.6	595.5	709.4	817.4	867.0
70°	475.8	525.5	645.2	753.2	799.9
72.5°	402.9	455.4	578.0	683.1	732.7
75°	329.9	385.3	505.0	607.2	653.9
77.5°	259.8	321.1	437.9	516.7	545.9
80°	192.7	251.1	353.2	408.7	432.1
82.5°	134.3	183.9	259.8	289.0	294.8
85°	84.7	116.8	157.6	175.2	172.2
87.5°	38.0	46.7	58.4	64.2	61.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)