

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: P388539

Luminaire Tested: **22CZ2-90VHE-UNV-L940-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: P388539  
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: 22CZ2-90VHE-UNV-L940-CD1-SDWPD1-U  
Description: 2x2 CRUZE LED TROFFER WITH 4000K, 90 LEDS, AND RIBBED LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

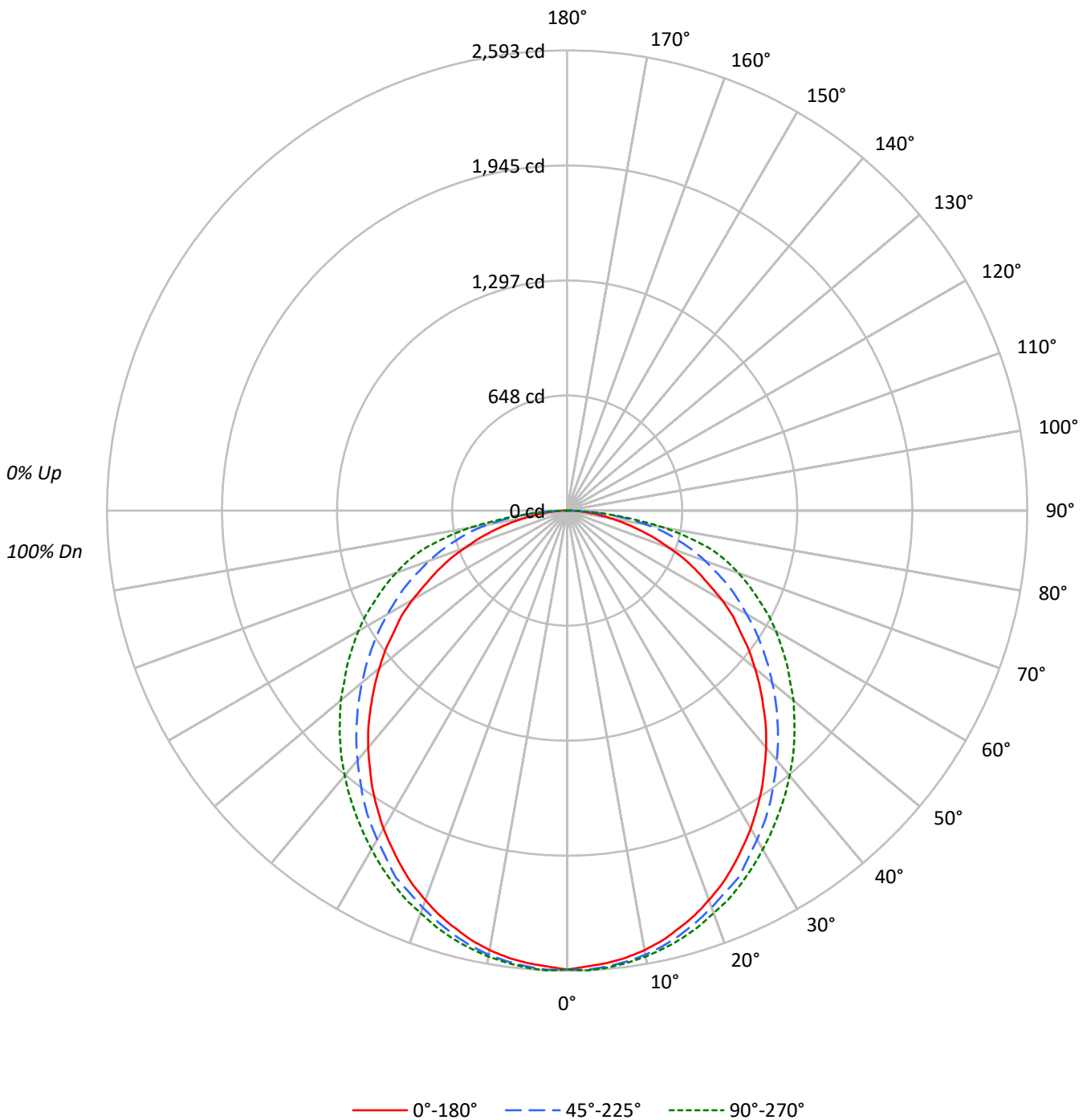
Lumens per Lamp: N/A  
Luminaire Lumens: 7605.3 lumens  
Efficiency: N/A  
Efficacy: 111.5 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.27 / 1.36  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 68.2  
Input Voltage (V): NR  
Input Current (Ain): NR  
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	98	94	105	101	96	93	96	93	90	92	90	87	89	86	84	82					82			
2	98	89	82	76	95	87	81	75	84	78	73	80	76	71	77	73	70	68					68			
3	89	78	69	63	86	76	68	62	73	66	61	70	65	60	68	63	59	56					56			
4	81	69	60	53	79	67	59	52	65	57	52	63	56	51	60	55	50	48					48			
5	75	61	52	45	72	60	52	45	58	50	44	56	49	44	54	48	44	41					41			
6	69	55	46	39	67	54	46	39	52	45	39	51	44	39	49	43	38	36					36			
7	64	50	41	35	62	49	41	35	48	40	34	46	39	34	45	39	34	32					32			
8	59	46	37	31	58	45	37	31	44	36	31	42	35	30	41	35	30	28					28			
9	56	42	34	28	54	41	33	28	40	33	28	39	32	27	38	32	27	25					25			
10	52	39	31	25	51	38	30	25	37	30	25	36	30	25	35	29	25	23					23			

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

	0°	45°	90°
0°	6959	6959	6959
5°	6914	6965	6985
10°	6872	6943	6974
15°	6787	6891	6954
20°	6687	6816	6912
25°	6567	6778	6889
30°	6431	6651	6849
35°	6282	6565	6835
40°	6126	6455	6849
45°	5953	6381	6893
50°	5781	6314	6972
55°	5583	6286	7093
60°	5418	6284	7311
65°	5147	6386	7578
70°	4799	6508	8068
75°	4397	6731	8716
80°	3828	7017	8584
85°	3350	6240	6817



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	244.6	3.2
10°-20°	696.6	9.2
20°-30°	1045.7	13.7
30°-40°	1249.5	16.4
40°-50°	1299.3	17.1
50°-60°	1204.3	15.8
60°-70°	987.8	13.0
70°-80°	667.7	8.8
80°-90°	209.8	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°	1986.8	26.1
0°-40°	3236.4	42.6
0°-60°	5739.9	75.5
0°-90°	7605.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7605.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2586	2586	2586	2586	2586	
5°	2560	2564	2578	2582	2586	243
15°	2436	2448	2474	2489	2496	687
25°	2212	2230	2283	2309	2320	1019
35°	1912	1938	1998	2058	2081	1195
45°	1564	1594	1677	1774	1811	1208
55°	1190	1228	1340	1460	1512	1070
65°	808	853	1003	1134	1190	799
75°	423	494	647	778	838	448
85°	108	150	202	224	221	123
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2585.9	2585.9	2585.9	2585.9	2585.9
2.5°	2571.0	2578.5	2589.7	2593.4	2593.4
5°	2559.7	2563.5	2578.5	2582.2	2585.9
7.5°	2541.0	2548.5	2563.5	2567.2	2571.0
10°	2514.8	2522.3	2541.0	2548.5	2552.3
12.5°	2481.2	2488.6	2511.1	2522.3	2526.1
15°	2436.2	2447.5	2473.7	2488.6	2496.1
17.5°	2391.3	2402.6	2428.8	2451.2	2458.7
20°	2335.2	2361.4	2380.1	2410.1	2413.8
22.5°	2279.1	2294.0	2327.7	2357.7	2372.6
25°	2211.7	2230.4	2282.8	2309.0	2320.2
27.5°	2140.6	2166.8	2208.0	2249.1	2264.1
30°	2069.5	2088.2	2140.6	2189.3	2204.2
32.5°	1990.9	2017.1	2073.2	2121.9	2144.3
35°	1912.3	1938.5	1998.4	2058.3	2080.7
37.5°	1826.3	1856.2	1916.1	1987.2	2017.1
40°	1743.9	1766.4	1837.5	1923.6	1949.7
42.5°	1657.8	1684.0	1758.9	1852.4	1882.4
45°	1564.3	1594.2	1676.6	1773.9	1811.3
47.5°	1474.5	1504.4	1594.2	1691.5	1736.4
50°	1380.9	1418.3	1508.2	1620.4	1665.3
52.5°	1291.1	1324.8	1425.8	1541.8	1583.0
55°	1190.1	1227.5	1339.8	1459.5	1511.9
57.5°	1107.7	1133.9	1257.4	1380.9	1433.3
60°	1006.7	1040.4	1167.6	1298.6	1358.5
62.5°	898.2	954.3	1085.3	1220.0	1279.9
65°	808.3	853.2	1002.9	1133.9	1190.1
67.5°	714.8	763.4	909.4	1047.8	1111.5
70°	610.0	673.6	827.1	965.5	1025.4
72.5°	516.4	583.8	741.0	875.7	939.3
75°	422.9	494.0	647.4	778.4	838.3
77.5°	333.1	411.7	561.3	662.4	699.8
80°	247.0	321.8	452.8	523.9	553.9
82.5°	172.1	235.8	333.1	370.5	378.0
85°	108.5	149.7	202.1	224.5	220.8
87.5°	48.7	59.9	74.8	82.3	78.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)