

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: P389477

Luminaire Tested: **22CZ2-90VHE-S-UNV-L940-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: P389477
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: 22CZ2-90VHE-S-UNV-L940-CD1-U
Description: 2x2 CRUZE LED TROFFER WITH 4000K, 90 LEDS, AND SMOOTH LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8190.3 lumens
Efficiency: N/A
Efficacy: 120.1 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

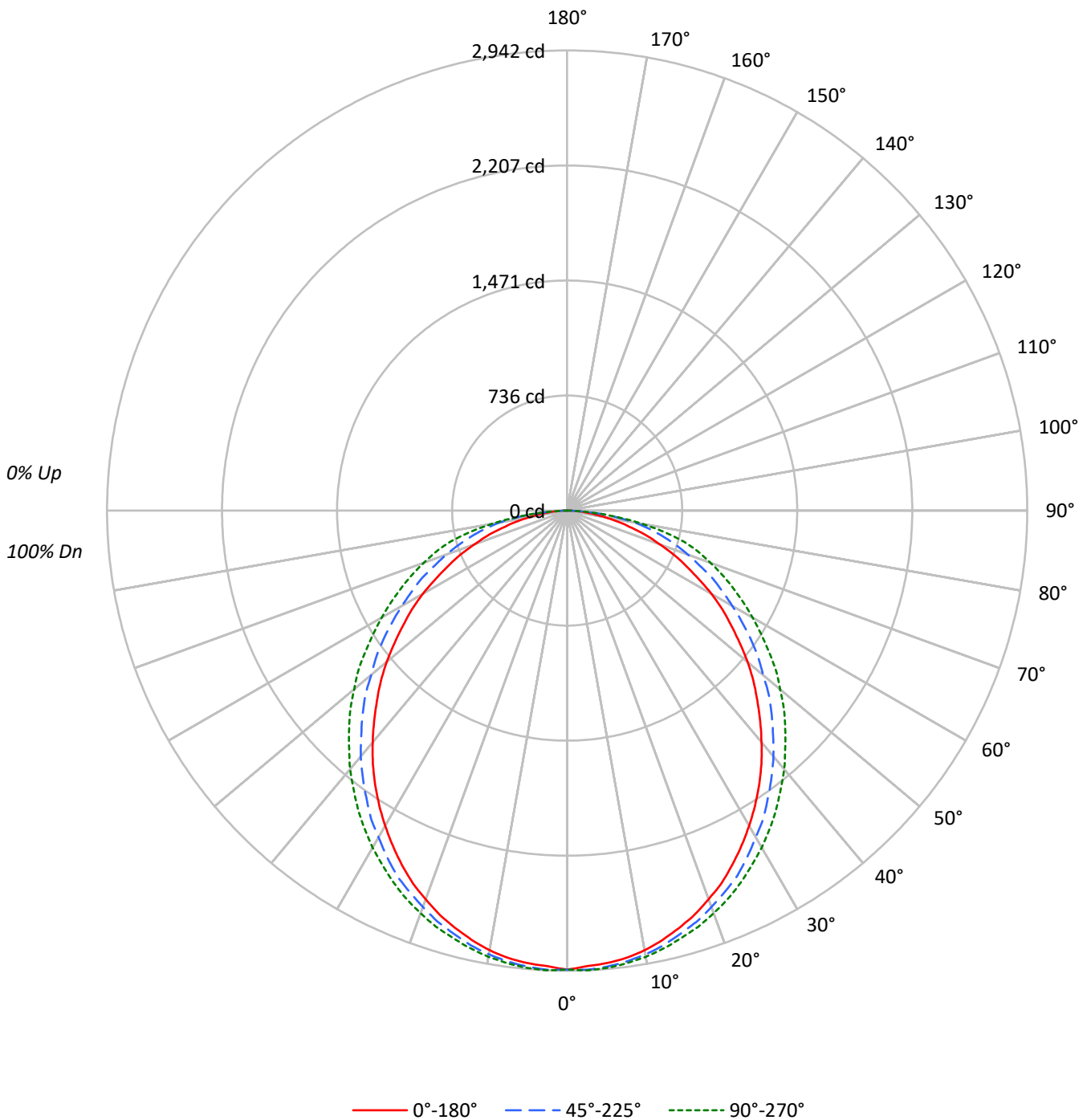
Input Watts (W): 68.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	0
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111		106	106	106		102	102	102	100
1	108	103	99	95	106	101	97	94	97	94	91		93	90	88		89	87	85	83
2	98	90	83	77	96	88	82	76	84	79	74		81	77	73		78	74	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	69	60	54	66	59	53		64	57	52		61	56	52	49
5	75	62	53	47	73	61	53	46	59	52	46		57	51	45		55	50	45	43
6	70	56	47	41	68	55	47	41	53	46	40		52	45	40		50	44	39	37
7	65	51	42	36	63	50	42	36	49	41	36		47	40	35		46	40	35	33
8	60	47	38	32	59	46	38	32	45	37	32		43	37	32		42	36	31	30
9	56	43	35	29	55	42	34	29	41	34	29		40	33	29		39	33	28	27
10	53	40	32	26	51	39	31	26	38	31	26		37	31	26		36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7897	7897	7897
5°	7845	7907	7928
10°	7800	7873	7915
15°	7697	7804	7878
20°	7573	7726	7846
25°	7421	7647	7795
30°	7231	7493	7730
35°	7030	7356	7658
40°	6792	7209	7585
45°	6544	7039	7504
50°	6303	6847	7439
55°	6006	6723	7386
60°	5738	6561	7363
65°	5353	6521	7446
70°	4931	6464	7667
75°	4450	6555	8065
80°	3849	6750	7579
85°	3186	5663	5663



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	277.5	3.4
10°-20°	789.8	9.6
20°-30°	1181.8	14.4
30°-40°	1399.5	17.1
40°-50°	1426.3	17.4
50°-60°	1278.4	15.6
60°-70°	1000.9	12.2
70°-80°	645.4	7.9
80°-90°	190.7	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°	2249.2	27.5
0°-40°	3648.7	44.5
0°-60°	6353.4	77.6
0°-90°	8190.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8190.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2935	2935	2935	2935	2935	
5°	2904	2912	2927	2931	2935	276
15°	2763	2778	2801	2824	2828	779
25°	2499	2522	2576	2610	2625	1150
35°	2140	2167	2239	2308	2331	1337
45°	1720	1758	1850	1945	1972	1328
55°	1280	1322	1433	1532	1574	1148
65°	841	890	1024	1124	1169	835
75°	428	493	630	738	776	459
85°	103	141	183	183	183	121
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2934.8	2934.8	2934.8	2934.8	2934.8
2.5°	2915.7	2923.4	2938.7	2942.5	2942.5
5°	2904.3	2911.9	2927.2	2931.0	2934.8
7.5°	2885.2	2889.0	2908.1	2915.7	2919.6
10°	2854.6	2862.2	2881.3	2892.8	2896.6
12.5°	2812.6	2824.0	2846.9	2862.2	2866.1
15°	2762.9	2778.2	2801.1	2824.0	2827.8
17.5°	2709.4	2724.7	2755.2	2782.0	2789.6
20°	2644.4	2663.5	2697.9	2728.5	2739.9
22.5°	2579.4	2594.7	2636.8	2675.0	2686.4
25°	2499.2	2522.1	2575.6	2610.0	2625.3
27.5°	2415.1	2441.9	2495.4	2541.2	2556.5
30°	2327.2	2354.0	2411.3	2468.6	2487.7
32.5°	2235.5	2266.1	2334.9	2392.2	2411.3
35°	2140.0	2166.7	2239.3	2308.1	2331.1
37.5°	2040.6	2063.6	2147.6	2220.2	2243.2
40°	1933.6	1964.2	2052.1	2136.2	2159.1
42.5°	1826.6	1861.0	1948.9	2040.6	2063.6
45°	1719.6	1757.8	1849.6	1945.1	1971.8
47.5°	1616.5	1647.0	1750.2	1841.9	1880.1
50°	1505.6	1536.2	1635.6	1738.7	1777.0
52.5°	1391.0	1433.0	1540.0	1639.4	1685.2
55°	1280.2	1322.2	1433.0	1532.4	1574.4
57.5°	1177.0	1211.4	1326.0	1429.2	1471.2
60°	1066.2	1096.7	1219.0	1329.8	1368.1
62.5°	947.7	993.6	1119.7	1222.8	1268.7
65°	840.7	890.4	1024.1	1123.5	1169.4
67.5°	741.4	787.2	917.1	1024.1	1073.8
70°	626.7	687.9	821.6	928.6	974.5
72.5°	535.0	588.5	726.1	833.1	882.7
75°	428.0	493.0	630.5	737.5	775.7
77.5°	340.1	405.1	535.0	619.1	638.2
80°	248.4	313.4	435.6	477.7	489.1
82.5°	168.1	229.3	313.4	324.8	328.6
85°	103.2	141.4	183.4	183.4	183.4
87.5°	49.7	57.3	65.0	61.1	61.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)