

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: P389951

Luminaire Tested: **24CZ2-85VHE-S-UNV-L930-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: P389951
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-1)
Test Lab: INNOVATIONS CENTER(G3)
Issue Date: 2/28/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-85VHE-S-UNV-L930-CD1-U
Description: 2x4 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: 7455.6 lumens
Efficiency: N/A
Efficacy: 128.8 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

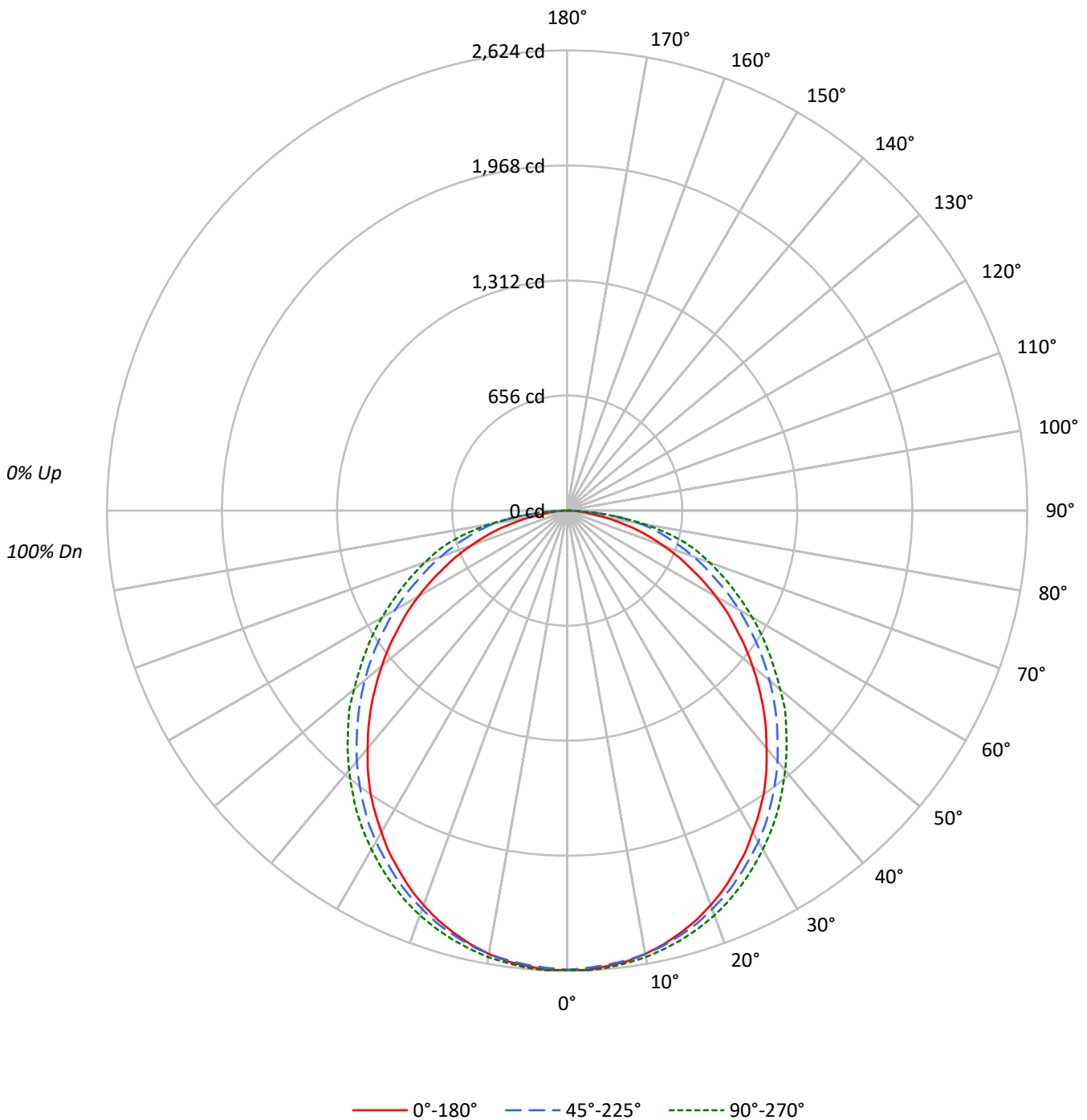
Input Watts (W): 57.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	93	97	93	90		93	90	88		89	87	85	83
2	98	90	83	77	96	88	81	76	84	79	74		81	76	72		78	74	71	69
3	89	79	70	64	87	77	69	63	74	67	62		71	66	61		69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53		63	57	52		61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46		57	50	45		55	49	45	42
6	70	56	47	40	68	55	47	40	53	46	40		52	45	40		50	44	39	37
7	64	51	42	36	63	50	42	36	48	41	35		47	40	35		46	39	35	33
8	60	46	38	32	58	46	37	32	44	37	32		43	36	31		42	36	31	29
9	56	43	34	29	55	42	34	29	41	34	28		40	33	28		39	33	28	26
10	53	39	31	26	51	39	31	26	38	31	26		37	30	26		36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3524	3524	3524
5°	3522	3512	3534
10°	3507	3507	3533
15°	3474	3490	3526
20°	3428	3462	3516
25°	3365	3428	3495
30°	3289	3389	3466
35°	3217	3334	3439
40°	3107	3278	3398
45°	3006	3213	3362
50°	2890	3153	3321
55°	2761	3094	3289
60°	2632	3046	3282
65°	2465	2993	3302
70°	2282	3009	3391
75°	2044	3066	3582
80°	1651	3248	3505
85°	1243	2851	2779



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	248.0	3.3
10°-20°	708.5	9.5
20°-30°	1065.1	14.3
30°-40°	1268.6	17.0
40°-50°	1298.4	17.4
50°-60°	1169.0	15.7
60°-70°	918.0	12.3
70°-80°	595.8	8.0
80°-90°	184.3	2.5
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°	2021.5	27.1
0°-40°	3290.2	44.1
0°-60°	5757.5	77.2
0°-90°	7455.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7455.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2619	2619	2619	2619	2619	
5°	2607	2612	2600	2614	2617	248
15°	2494	2501	2506	2527	2532	703
25°	2266	2285	2309	2347	2354	1044
35°	1958	1982	2030	2079	2094	1222
45°	1580	1618	1688	1752	1767	1218
55°	1177	1229	1319	1388	1402	1055
65°	774	834	940	1018	1037	771
75°	393	469	590	670	689	416
85°	80	149	185	180	180	97
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2619.2	2619.2	2619.2	2619.2	2619.2
2.5°	2621.6	2621.6	2609.7	2621.6	2623.9
5°	2607.4	2612.1	2600.3	2614.5	2616.8
7.5°	2593.2	2593.2	2586.0	2600.3	2602.6
10°	2567.1	2569.5	2567.1	2583.7	2586.0
12.5°	2533.9	2538.7	2541.1	2557.6	2560.0
15°	2493.7	2500.8	2505.5	2526.8	2531.6
17.5°	2448.7	2455.8	2467.6	2491.3	2496.1
20°	2394.2	2403.7	2417.9	2448.7	2455.8
22.5°	2335.0	2344.5	2368.2	2396.6	2408.4
25°	2266.3	2285.3	2309.0	2346.9	2354.0
27.5°	2197.7	2214.2	2245.0	2285.3	2294.8
30°	2117.1	2143.2	2181.1	2221.3	2230.8
32.5°	2039.0	2065.0	2110.0	2152.7	2164.5
35°	1958.5	1982.2	2029.5	2079.3	2093.5
37.5°	1866.1	1896.9	1949.0	1998.7	2012.9
40°	1769.0	1806.9	1866.1	1918.2	1934.8
42.5°	1676.7	1716.9	1776.1	1833.0	1851.9
45°	1579.6	1617.5	1688.5	1752.4	1766.7
47.5°	1480.1	1522.7	1598.5	1662.5	1686.1
50°	1380.6	1425.6	1506.2	1572.5	1586.7
52.5°	1281.2	1328.5	1413.8	1484.8	1491.9
55°	1177.0	1229.1	1319.1	1387.8	1402.0
57.5°	1082.3	1127.3	1224.3	1295.4	1312.0
60°	978.1	1027.8	1132.0	1198.3	1219.6
62.5°	878.6	930.7	1039.6	1105.9	1124.9
65°	774.4	833.6	940.2	1018.3	1037.3
67.5°	684.4	741.2	854.9	930.7	949.6
70°	580.2	644.1	764.9	843.1	862.0
72.5°	490.2	556.5	677.3	753.1	781.5
75°	393.1	468.9	589.7	670.2	689.1
77.5°	298.4	386.0	509.2	570.7	570.7
80°	213.1	305.5	419.2	447.6	452.3
82.5°	139.7	229.7	310.2	307.9	307.9
85°	80.5	149.2	184.7	180.0	180.0
87.5°	30.8	61.6	66.3	66.3	63.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)