

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: P389957

Luminaire Tested: **24CZ2-85VHE-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: P389957
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-L940-CD1-U
Description: 2x4 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: 7719.1 lumens
Efficiency: N/A
Efficacy: 133.3 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

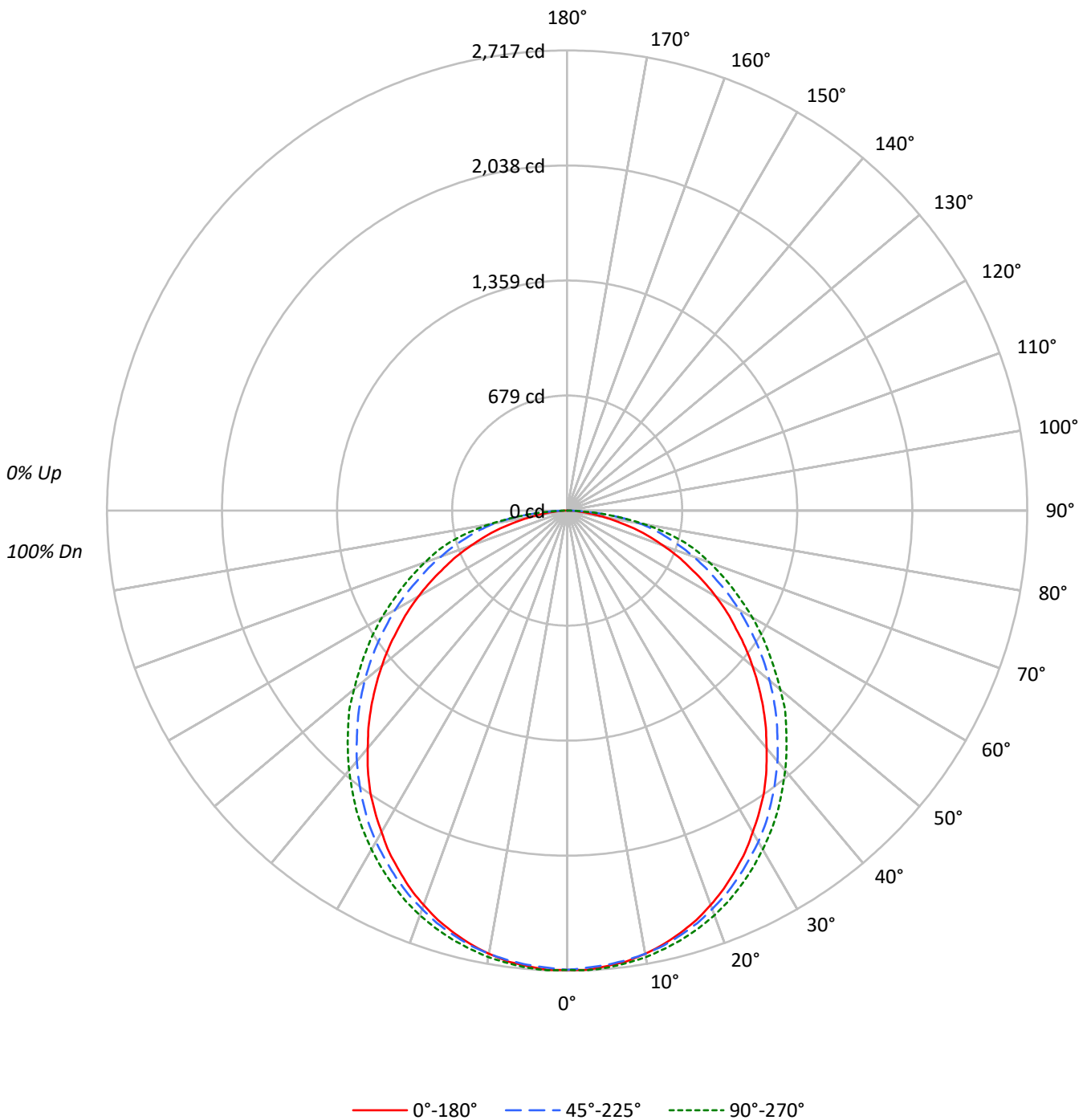
Input Watts (W): 57.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	3649	3649	3649
5°	3646	3636	3659
10°	3631	3631	3658
15°	3596	3613	3651
20°	3549	3584	3641
25°	3483	3549	3618
30°	3406	3508	3588
35°	3331	3451	3560
40°	3217	3394	3518
45°	3112	3326	3480
50°	2992	3264	3439
55°	2859	3204	3405
60°	2725	3154	3398
65°	2553	3099	3419
70°	2363	3116	3511
75°	2116	3174	3709
80°	1710	3363	3629
85°	1288	2952	2876



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	256.7	3.3
10°-20°	733.6	9.5
20°-30°	1102.7	14.3
30°-40°	1313.5	17.0
40°-50°	1344.3	17.4
50°-60°	1210.3	15.7
60°-70°	950.4	12.3
70°-80°	616.9	8.0
80°-90°	190.8	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°	2093.0	27.1
0°-40°	3406.5	44.1
0°-60°	5961.0	77.2
0°-90°	7719.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7719.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2712	2712	2712	2712	2712	
5°	2700	2704	2692	2707	2709	256
15°	2582	2589	2594	2616	2621	728
25°	2346	2366	2391	2430	2437	1081
35°	2028	2052	2101	2153	2168	1265
45°	1635	1675	1748	1814	1829	1261
55°	1219	1272	1366	1437	1452	1092
65°	802	863	973	1054	1074	798
75°	407	486	610	694	714	431
85°	83	154	191	186	186	101
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2711.8	2711.8	2711.8	2711.8	2711.8
2.5°	2714.2	2714.2	2702.0	2714.2	2716.7
5°	2699.5	2704.4	2692.2	2706.9	2709.3
7.5°	2684.8	2684.8	2677.4	2692.2	2694.6
10°	2657.8	2660.3	2657.8	2675.0	2677.4
12.5°	2623.5	2628.4	2630.9	2648.0	2650.5
15°	2581.8	2589.2	2594.1	2616.1	2621.1
17.5°	2535.2	2542.6	2554.9	2579.4	2584.3
20°	2478.8	2488.6	2503.4	2535.2	2542.6
22.5°	2417.5	2427.4	2451.9	2481.3	2493.6
25°	2346.4	2366.1	2390.6	2429.8	2437.2
27.5°	2275.3	2292.5	2324.4	2366.1	2375.9
30°	2192.0	2218.9	2258.2	2299.9	2309.7
32.5°	2111.1	2138.0	2184.6	2228.8	2241.0
35°	2027.7	2052.2	2101.3	2152.7	2167.5
37.5°	1932.1	1963.9	2017.9	2069.4	2084.1
40°	1831.5	1870.8	1932.1	1986.0	2003.2
42.5°	1735.9	1777.6	1838.9	1897.7	1917.4
45°	1635.4	1674.6	1748.2	1814.4	1829.1
47.5°	1532.4	1576.6	1655.0	1721.2	1745.7
50°	1429.4	1476.0	1559.4	1628.0	1642.8
52.5°	1326.5	1375.5	1463.8	1537.3	1544.7
55°	1218.6	1272.5	1365.7	1436.8	1451.5
57.5°	1120.5	1167.1	1267.6	1341.2	1358.3
60°	1012.6	1064.1	1172.0	1240.6	1262.7
62.5°	909.6	963.6	1076.4	1145.0	1164.6
65°	801.8	863.1	973.4	1054.3	1073.9
67.5°	708.6	767.4	885.1	963.6	983.2
70°	600.7	666.9	792.0	872.9	892.5
72.5°	507.5	576.2	701.2	779.7	809.1
75°	407.0	485.5	610.5	693.9	713.5
77.5°	308.9	399.7	527.2	590.9	590.9
80°	220.7	316.3	434.0	463.4	468.3
82.5°	144.7	237.8	321.2	318.7	318.7
85°	83.4	154.5	191.2	186.3	186.3
87.5°	31.9	63.7	68.7	68.7	66.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)