

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: P389933

Luminaire Tested: **24CZ2-80VHE-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: P389933
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: 24CZ2-80VHE-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: 7295.4 lumens
Efficiency: N/A
Efficacy: 135.6 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

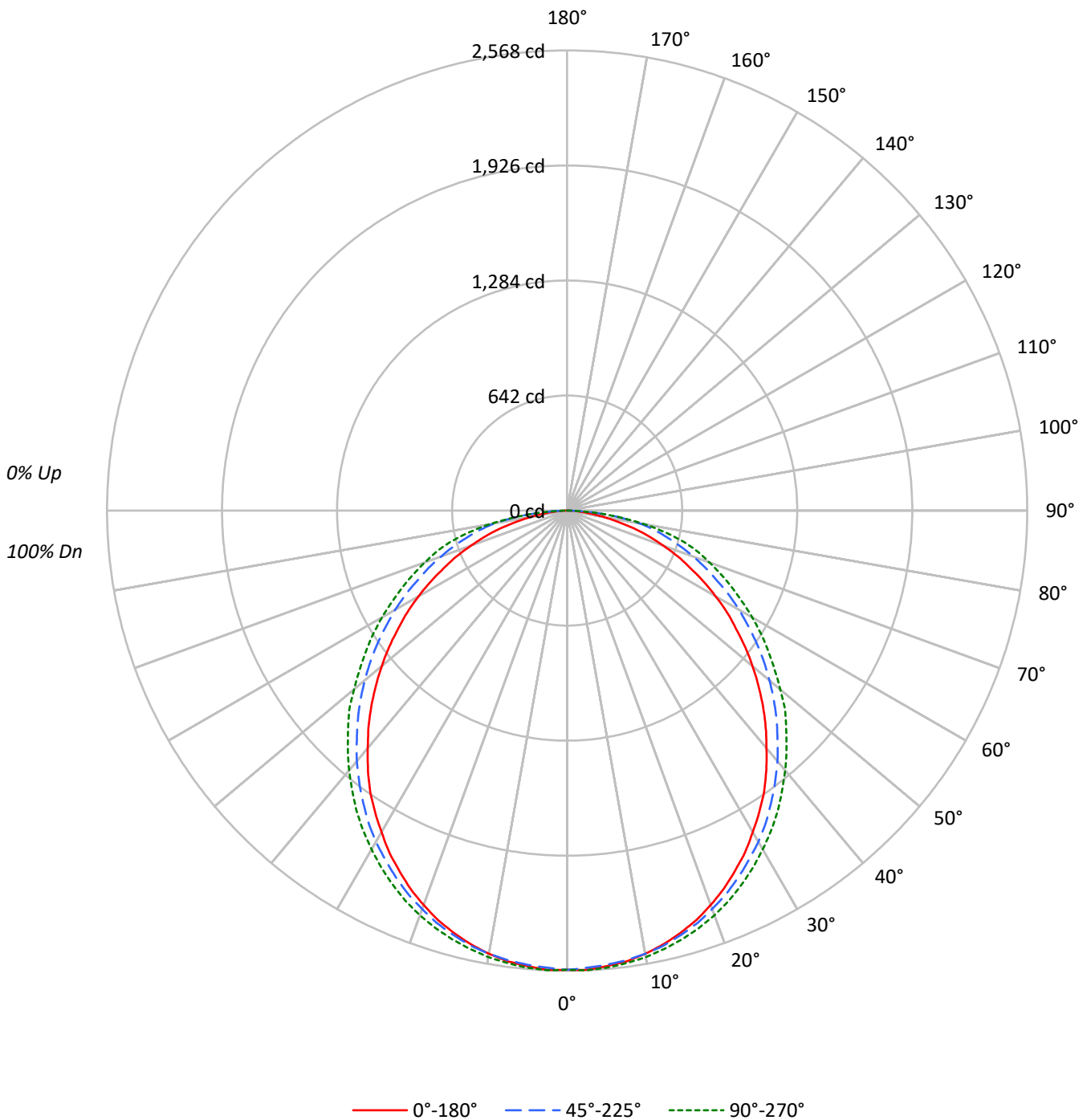
Input Watts (W): 53.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	3448	3448	3448
5°	3446	3437	3458
10°	3432	3432	3457
15°	3399	3415	3451
20°	3355	3388	3441
25°	3292	3354	3420
30°	3219	3316	3391
35°	3148	3262	3365
40°	3040	3207	3325
45°	2941	3144	3289
50°	2828	3085	3250
55°	2702	3028	3218
60°	2575	2981	3211
65°	2413	2929	3231
70°	2233	2945	3318
75°	2000	3000	3505
80°	1616	3178	3429
85°	1216	2790	2719



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	242.6	3.3
10°-20°	693.3	9.5
20°-30°	1042.2	14.3
30°-40°	1241.4	17.0
40°-50°	1270.5	17.4
50°-60°	1143.8	15.7
60°-70°	898.3	12.3
70°-80°	583.0	8.0
80°-90°	180.3	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°	1978.1	27.1
0°-40°	3219.5	44.1
0°-60°	5633.8	77.2
0°-90°	7295.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7295.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2563	2563	2563	2563	2563	
5°	2551	2556	2544	2558	2561	242
15°	2440	2447	2452	2472	2477	688
25°	2218	2236	2259	2296	2303	1022
35°	1916	1940	1986	2035	2048	1196
45°	1546	1583	1652	1715	1729	1192
55°	1152	1203	1291	1358	1372	1033
65°	758	816	920	996	1015	754
75°	385	459	577	656	674	407
85°	79	146	181	176	176	95
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2562.9	2562.9	2562.9	2562.9	2562.9
2.5°	2565.2	2565.2	2553.7	2565.2	2567.6
5°	2551.3	2556.0	2544.4	2558.3	2560.6
7.5°	2537.4	2537.4	2530.5	2544.4	2546.7
10°	2511.9	2514.3	2511.9	2528.2	2530.5
12.5°	2479.5	2484.1	2486.5	2502.7	2505.0
15°	2440.1	2447.1	2451.7	2472.5	2477.2
17.5°	2396.1	2403.0	2414.6	2437.8	2442.4
20°	2342.8	2352.0	2366.0	2396.1	2403.0
22.5°	2284.8	2294.1	2317.3	2345.1	2356.7
25°	2217.6	2236.2	2259.4	2296.4	2303.4
27.5°	2150.4	2166.7	2196.8	2236.2	2245.5
30°	2071.7	2097.1	2134.2	2173.6	2182.9
32.5°	1995.2	2020.7	2064.7	2106.4	2118.0
35°	1916.4	1939.6	1985.9	2034.6	2048.5
37.5°	1826.0	1856.1	1907.1	1955.8	1969.7
40°	1731.0	1768.1	1826.0	1877.0	1893.2
42.5°	1640.6	1680.0	1738.0	1793.6	1812.1
45°	1545.6	1582.7	1652.2	1714.8	1728.7
47.5°	1448.3	1490.0	1564.2	1626.7	1649.9
50°	1351.0	1395.0	1473.8	1538.7	1552.6
52.5°	1253.7	1300.0	1383.4	1452.9	1459.9
55°	1151.7	1202.7	1290.7	1357.9	1371.8
57.5°	1059.0	1103.0	1198.0	1267.6	1283.8
60°	957.0	1005.7	1107.7	1172.5	1193.4
62.5°	859.7	910.7	1017.3	1082.2	1100.7
65°	757.8	815.7	920.0	996.4	1015.0
67.5°	669.7	725.3	836.5	910.7	929.2
70°	567.7	630.3	748.5	825.0	843.5
72.5°	479.7	544.6	662.7	736.9	764.7
75°	384.7	458.8	577.0	655.8	674.3
77.5°	292.0	377.7	498.2	558.5	558.5
80°	208.6	298.9	410.2	438.0	442.6
82.5°	136.7	224.8	303.6	301.2	301.2
85°	78.8	146.0	180.7	176.1	176.1
87.5°	30.1	60.2	64.9	64.9	62.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)