

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: P389043

Luminaire Tested: **24CZ2-90VHE-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: P389043
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-5)
Test Lab: INNOVATIONS CENTER(G3)
Issue Date: 2/28/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-90VHE-UNV-L940-CD1-SDWPD1-U
Description: 2x4 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: 7545.3 lumens
Efficiency: N/A
Efficacy: 122.1 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.27 / 1.37
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

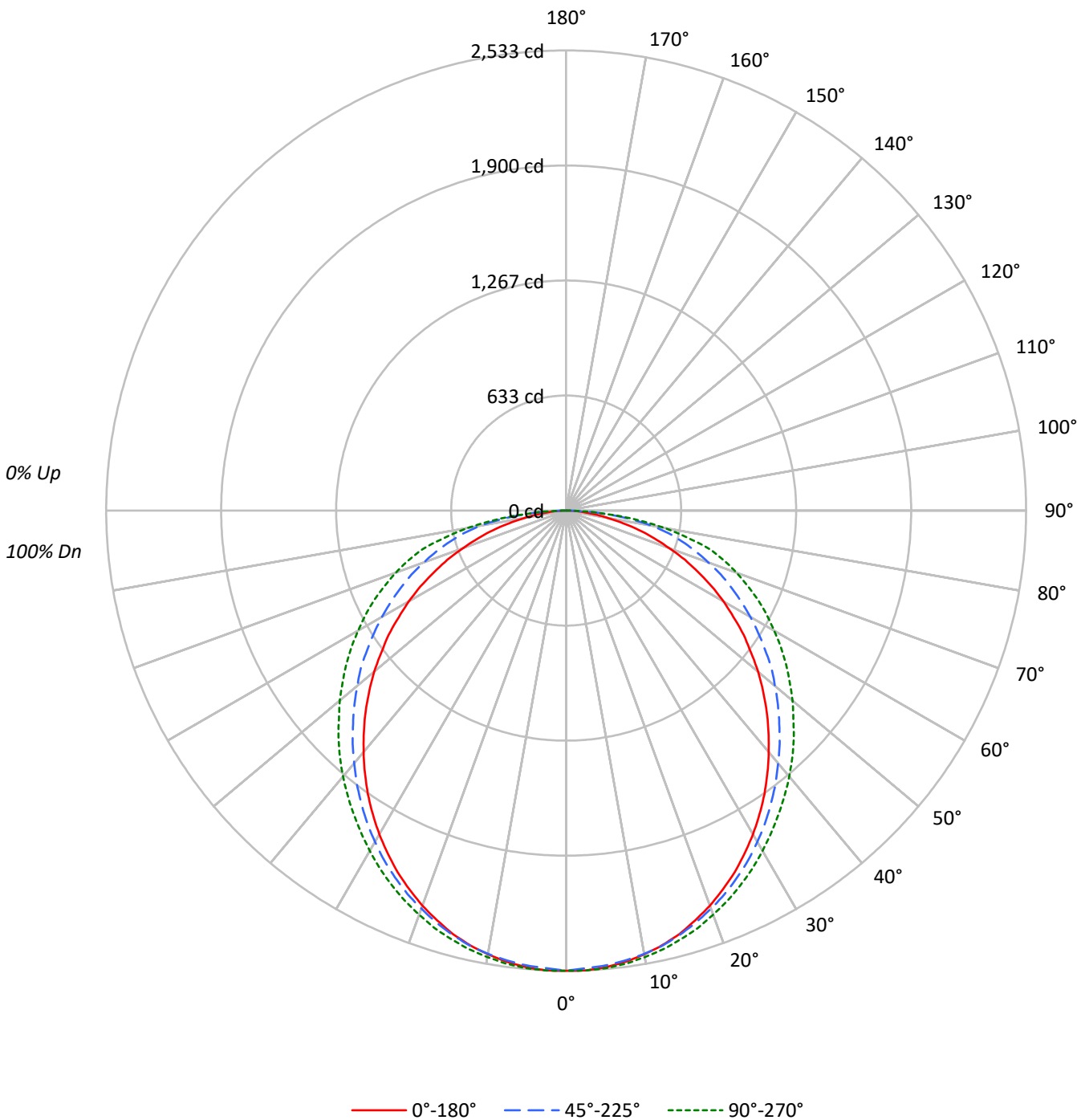
Input Watts (W): 61.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT





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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				0
RW	70	50	30	10	70	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		100
1	108	103	98	94	105	100	96	92	96	93	89		92	89	87		82
2	98	89	82	76	95	87	80	75	83	78	73		80	75	71		67
3	89	78	69	62	86	76	68	62	73	66	61		70	64	60		56
4	81	69	59	52	79	67	59	52	65	57	51		62	56	51		48
5	74	61	52	45	72	60	51	45	58	50	44		56	49	44		41
6	69	55	46	39	67	54	45	39	52	44	39		50	44	38		36
7	64	50	41	35	62	49	40	34	47	40	34		46	39	34		32
8	59	45	37	31	58	45	36	31	43	36	30		42	35	30		28
9	55	42	33	28	54	41	33	28	40	33	27		39	32	27		25
10	52	38	30	25	51	38	30	25	37	30	25		36	29	25		23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3409	3409	3409
5°	3408	3394	3415
10°	3389	3385	3409
15°	3360	3367	3403
20°	3314	3339	3389
25°	3260	3309	3376
30°	3196	3271	3361
35°	3127	3230	3350
40°	3047	3189	3357
45°	2971	3158	3373
50°	2889	3141	3405
55°	2800	3137	3468
60°	2690	3151	3558
65°	2550	3199	3712
70°	2367	3279	3923
75°	2160	3443	4255
80°	1776	3708	4254
85°	1360	3421	3654



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	239.6	3.2
10°-20°	684.0	9.1
20°-30°	1029.3	13.6
30°-40°	1233.5	16.3
40°-50°	1285.5	17.0
50°-60°	1196.0	15.9
60°-70°	985.0	13.1
70°-80°	670.9	8.9
80°-90°	221.5	2.9
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°	1952.9	25.9
0°-40°	3186.5	42.2
0°-60°	5667.9	75.1
0°-90°	7545.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7545.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2533	2533	2533	2533	2533	
5°	2523	2523	2513	2526	2528	239
15°	2412	2415	2418	2440	2443	680
25°	2196	2206	2229	2266	2274	1011
35°	1904	1926	1967	2020	2040	1190
45°	1561	1594	1660	1743	1773	1204
55°	1194	1234	1337	1443	1478	1064
65°	801	869	1005	1123	1166	795
75°	416	509	662	781	818	438
85°	88	171	222	237	237	109
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2533.3	2533.3	2533.3	2533.3	2533.3
2.5°	2533.3	2533.3	2520.7	2533.3	2533.3
5°	2523.2	2523.2	2513.2	2525.8	2528.3
7.5°	2505.6	2508.1	2498.1	2513.2	2515.7
10°	2480.4	2482.9	2477.9	2493.0	2495.5
12.5°	2450.2	2452.7	2452.7	2470.4	2472.9
15°	2412.4	2415.0	2417.5	2440.1	2442.7
17.5°	2364.6	2372.1	2377.2	2404.9	2409.9
20°	2314.2	2321.8	2331.9	2362.1	2367.1
22.5°	2256.3	2266.4	2284.0	2316.7	2324.3
25°	2195.9	2205.9	2228.6	2266.4	2273.9
27.5°	2127.9	2143.0	2170.7	2211.0	2221.1
30°	2057.4	2072.5	2105.2	2148.0	2163.1
32.5°	1981.8	2002.0	2039.7	2087.6	2102.7
35°	1903.8	1926.4	1966.7	2019.6	2039.7
37.5°	1820.7	1845.8	1893.7	1951.6	1976.8
40°	1735.0	1765.3	1815.6	1883.6	1911.3
42.5°	1649.4	1677.1	1740.1	1813.1	1843.3
45°	1561.3	1594.0	1659.5	1742.6	1772.8
47.5°	1470.6	1503.4	1581.4	1669.6	1697.3
50°	1380.0	1412.7	1500.8	1594.0	1626.8
52.5°	1281.8	1324.6	1425.3	1518.5	1551.2
55°	1193.6	1233.9	1337.2	1442.9	1478.2
57.5°	1092.9	1140.7	1254.1	1364.9	1402.6
60°	999.7	1050.1	1171.0	1284.3	1322.1
62.5°	904.0	959.4	1087.9	1203.7	1246.5
65°	800.8	868.8	1004.8	1123.1	1165.9
67.5°	707.6	778.1	921.7	1042.5	1080.3
70°	601.8	687.5	833.5	954.4	997.2
72.5°	511.2	596.8	750.4	868.8	911.6
75°	415.5	508.7	662.3	780.6	818.4
77.5°	319.8	423.1	576.7	667.3	679.9
80°	229.2	337.4	478.5	531.3	549.0
82.5°	161.2	259.4	352.5	387.8	397.9
85°	88.1	171.2	221.6	236.7	236.7
87.5°	37.8	73.0	88.1	90.7	93.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)