

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: P390988

Luminaire Tested: **24CZ2-120VHE-HRP-UNV-L940-CD2-SWPD1-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: P390988
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-19)
Test Lab: INNOVATIONS CENTER(G3)
Issue Date: 2/28/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-120VHE-HRP-UNV-L940-CD2-SWPD1-U
Description: 2x4 CRUZE LED TROFFER WITH 4000K, 90 LEDS, AND HRP LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8744.3 lumens
Efficiency: N/A
Efficacy: 104.6 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

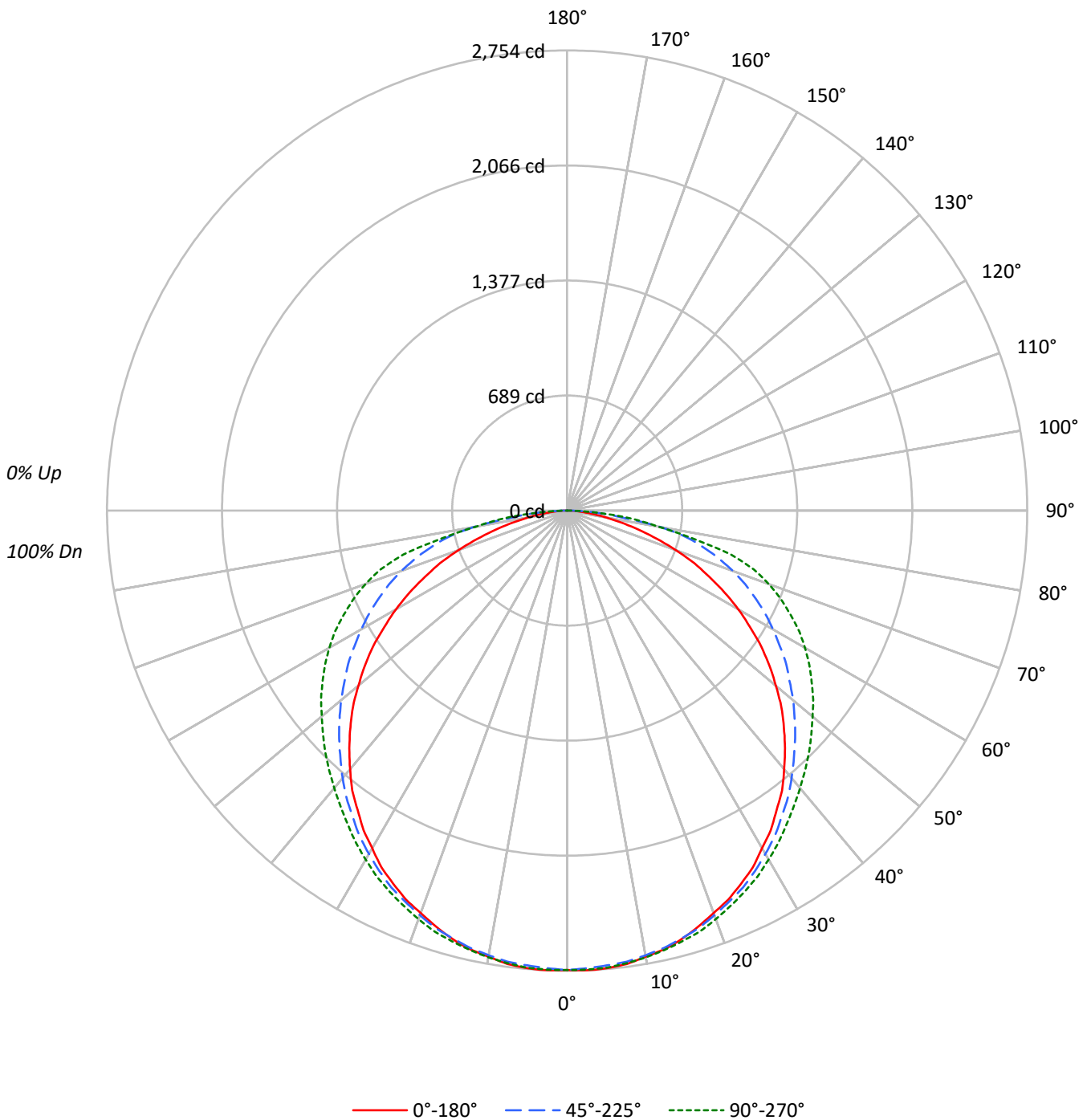
Input Watts (W): 83.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	98	94	105	100	96	92	96	93	89	92	89	87	88	86	84	82
2	97	89	81	75	95	87	80	74	83	77	72	80	75	71	77	73	69	67
3	88	77	68	62	86	76	67	61	72	66	60	70	64	59	67	62	58	56
4	81	68	59	52	78	67	58	51	64	57	51	62	55	50	59	54	49	47
5	74	60	51	44	72	59	51	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	45	38	51	44	38	50	43	37	48	42	37	35
7	63	49	40	34	61	48	40	34	47	39	33	45	38	33	44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30	41	34	29	40	34	29	27
9	55	41	33	27	53	40	32	27	39	32	27	38	31	26	37	31	26	24
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3700	3700	3700
5°	3714	3691	3708
10°	3704	3692	3709
15°	3697	3691	3716
20°	3670	3689	3726
25°	3657	3696	3735
30°	3625	3686	3747
35°	3591	3676	3762
40°	3550	3672	3809
45°	3491	3673	3895
50°	3414	3695	4013
55°	3327	3754	4192
60°	3186	3828	4423
65°	2983	3963	4695
70°	2713	4146	5050
75°	2300	4374	5276
80°	1815	4403	4268
85°	1338	3348	3750



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	260.8	3.0
10°-20°	750.7	8.6
20°-30°	1148.0	13.1
30°-40°	1403.4	16.0
40°-50°	1495.8	17.1
50°-60°	1430.1	16.4
60°-70°	1211.5	13.9
70°-80°	814.2	9.3
80°-90°	229.7	2.6
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°	2159.6	24.7
0°-40°	3563.0	40.7
0°-60°	6488.9	74.2
0°-90°	8744.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8744.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2750	2750	2750	2750	2750	
5°	2750	2746	2732	2746	2746	261
15°	2654	2654	2650	2672	2667	748
25°	2464	2472	2490	2511	2516	1135
35°	2186	2203	2238	2281	2290	1369
45°	1835	1865	1930	2012	2047	1415
55°	1418	1470	1600	1726	1787	1263
65°	937	1032	1245	1410	1475	930
75°	442	603	841	985	1015	474
85°	87	178	217	234	243	107
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2749.8	2749.8	2749.8	2749.8	2749.8
2.5°	2754.2	2754.2	2741.2	2749.8	2749.8
5°	2749.8	2745.5	2732.5	2745.5	2745.5
7.5°	2736.8	2732.5	2723.8	2736.8	2732.5
10°	2710.8	2710.8	2702.1	2715.1	2715.1
12.5°	2689.1	2684.8	2680.4	2697.8	2693.4
15°	2654.4	2654.4	2650.1	2671.8	2667.4
17.5°	2611.0	2615.4	2619.7	2637.1	2641.4
20°	2563.3	2572.0	2576.3	2602.4	2602.4
22.5°	2520.0	2524.3	2533.0	2559.0	2559.0
25°	2463.6	2472.2	2489.6	2511.3	2515.6
27.5°	2407.2	2411.5	2433.2	2463.6	2467.9
30°	2333.5	2346.5	2372.5	2407.2	2411.5
32.5°	2268.4	2281.4	2311.8	2346.5	2355.1
35°	2186.0	2203.3	2238.0	2281.4	2290.1
37.5°	2112.3	2125.3	2168.6	2216.3	2229.4
40°	2021.2	2047.2	2090.6	2147.0	2168.6
42.5°	1930.1	1956.1	2008.2	2081.9	2107.9
45°	1834.7	1865.0	1930.1	2012.5	2047.2
47.5°	1739.2	1773.9	1847.7	1943.1	1982.1
50°	1630.8	1674.2	1765.3	1873.7	1917.1
52.5°	1526.7	1578.8	1678.5	1800.0	1856.4
55°	1418.3	1470.3	1600.5	1726.2	1787.0
57.5°	1296.8	1366.2	1509.4	1652.5	1717.6
60°	1184.1	1249.1	1422.6	1578.8	1643.8
62.5°	1062.6	1149.4	1335.9	1500.7	1565.8
65°	936.9	1032.3	1244.8	1409.6	1474.7
67.5°	824.1	928.2	1153.7	1318.5	1383.6
70°	689.6	819.7	1054.0	1218.8	1283.8
72.5°	563.8	707.0	949.9	1110.3	1171.1
75°	442.4	602.9	841.4	984.6	1014.9
77.5°	329.6	498.8	728.7	789.4	767.7
80°	234.2	399.0	568.2	537.8	550.8
82.5°	151.8	303.6	351.3	399.0	412.0
85°	86.7	177.8	216.9	234.2	242.9
87.5°	39.0	65.1	86.7	86.7	82.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)