

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: P391365

Luminaire Tested: **24CZ2-45VHE-HRP-UNV-L930-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: P391365
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: 24CZ2-45VHE-HRP-UNV-L930-CD1-SDWPD1-U
Description: 2x4 CRUZE LED TROFFER WITH 3000K, 90 LEDS, AND HRP LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3115.2 lumens
Efficiency: N/A
Efficacy: 105.2 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

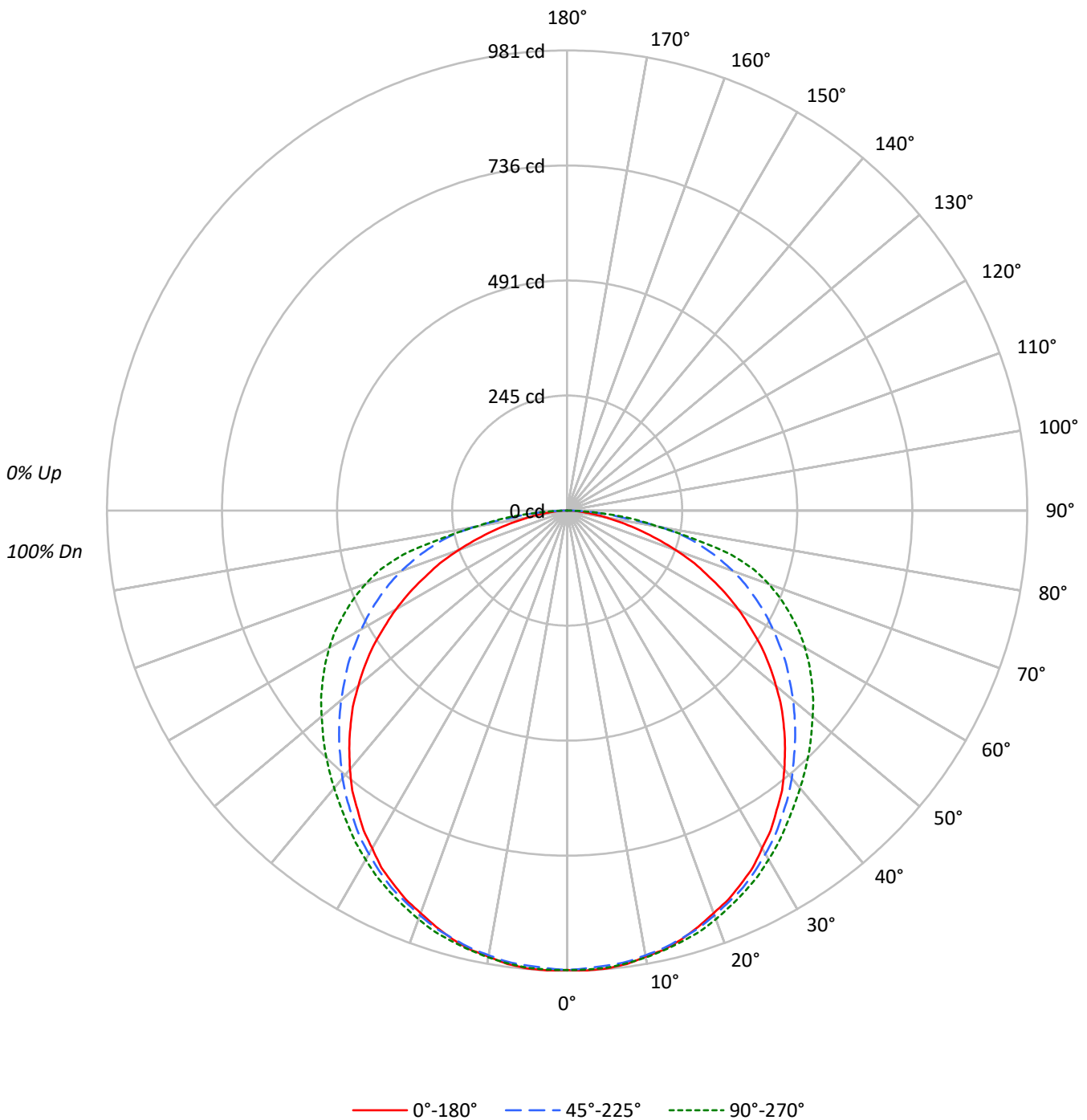
Input Watts (W): 29.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1318	1318	1318
5°	1323	1315	1321
10°	1319	1315	1322
15°	1317	1315	1324
20°	1308	1314	1327
25°	1303	1317	1330
30°	1292	1313	1335
35°	1279	1310	1340
40°	1265	1308	1357
45°	1244	1308	1388
50°	1216	1316	1430
55°	1185	1338	1493
60°	1135	1364	1576
65°	1063	1412	1673
70°	967	1477	1799
75°	819	1559	1880
80°	646	1568	1520
85°	477	1193	1335



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	92.9	3.0
10°-20°	267.4	8.6
20°-30°	409.0	13.1
30°-40°	500.0	16.0
40°-50°	532.9	17.1
50°-60°	509.5	16.4
60°-70°	431.6	13.9
70°-80°	290.1	9.3
80°-90°	81.8	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°	769.4	24.7
0°-40°	1269.3	40.7
0°-60°	2311.7	74.2
0°-90°	3115.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3115.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	980	980	980	980	980	
5°	980	978	974	978	978	93
15°	946	946	944	952	950	267
25°	878	881	887	895	896	405
35°	779	785	797	813	816	488
45°	654	664	688	717	729	504
55°	505	524	570	615	637	450
65°	334	368	444	502	525	331
75°	158	215	300	351	362	169
85°	31	63	77	83	86	38
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	979.6	979.6	979.6	979.6	979.6
2.5°	981.2	981.2	976.6	979.6	979.6
5°	979.6	978.1	973.5	978.1	978.1
7.5°	975.0	973.5	970.4	975.0	973.5
10°	965.7	965.7	962.6	967.3	967.3
12.5°	958.0	956.5	954.9	961.1	959.6
15°	945.6	945.6	944.1	951.8	950.3
17.5°	930.2	931.7	933.3	939.5	941.0
20°	913.2	916.3	917.8	927.1	927.1
22.5°	897.7	899.3	902.4	911.7	911.7
25°	877.7	880.8	886.9	894.7	896.2
27.5°	857.6	859.1	866.8	877.7	879.2
30°	831.3	835.9	845.2	857.6	859.1
32.5°	808.1	812.8	823.6	835.9	839.0
35°	778.8	784.9	797.3	812.8	815.9
37.5°	752.5	757.1	772.6	789.6	794.2
40°	720.1	729.3	744.8	764.9	772.6
42.5°	687.6	696.9	715.4	741.7	751.0
45°	653.6	664.4	687.6	717.0	729.3
47.5°	619.6	632.0	658.2	692.2	706.1
50°	581.0	596.4	628.9	667.5	683.0
52.5°	543.9	562.4	598.0	641.2	661.3
55°	505.3	523.8	570.2	615.0	636.6
57.5°	462.0	486.7	537.7	588.7	611.9
60°	421.8	445.0	506.8	562.4	585.6
62.5°	378.6	409.5	475.9	534.6	557.8
65°	333.8	367.8	443.5	502.2	525.4
67.5°	293.6	330.7	411.0	469.7	492.9
70°	245.7	292.0	375.5	434.2	457.4
72.5°	200.9	251.9	338.4	395.6	417.2
75°	157.6	214.8	299.8	350.8	361.6
77.5°	117.4	177.7	259.6	281.2	273.5
80°	83.4	142.2	202.4	191.6	196.2
82.5°	54.1	108.2	125.2	142.2	146.8
85°	30.9	63.4	77.3	83.4	86.5
87.5°	13.9	23.2	30.9	30.9	29.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)