

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: P390505

Luminaire Tested: **22CZ2-60VHE-HRP-UNV-L935-CD1-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: P390505
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-24)
Test Lab: INNOVATIONS CENTER(G3)
Issue Date: 2/28/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 22CZ2-60VHE-HRP-UNV-L935-CD1-SWPD1-U
Description: 2x2 CRUZE LED TROFFER WITH 3500K, 90 LEDS, AND HRP LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4330.6 lumens
Efficiency: N/A
Efficacy: 98.2 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.3 / 1.41
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

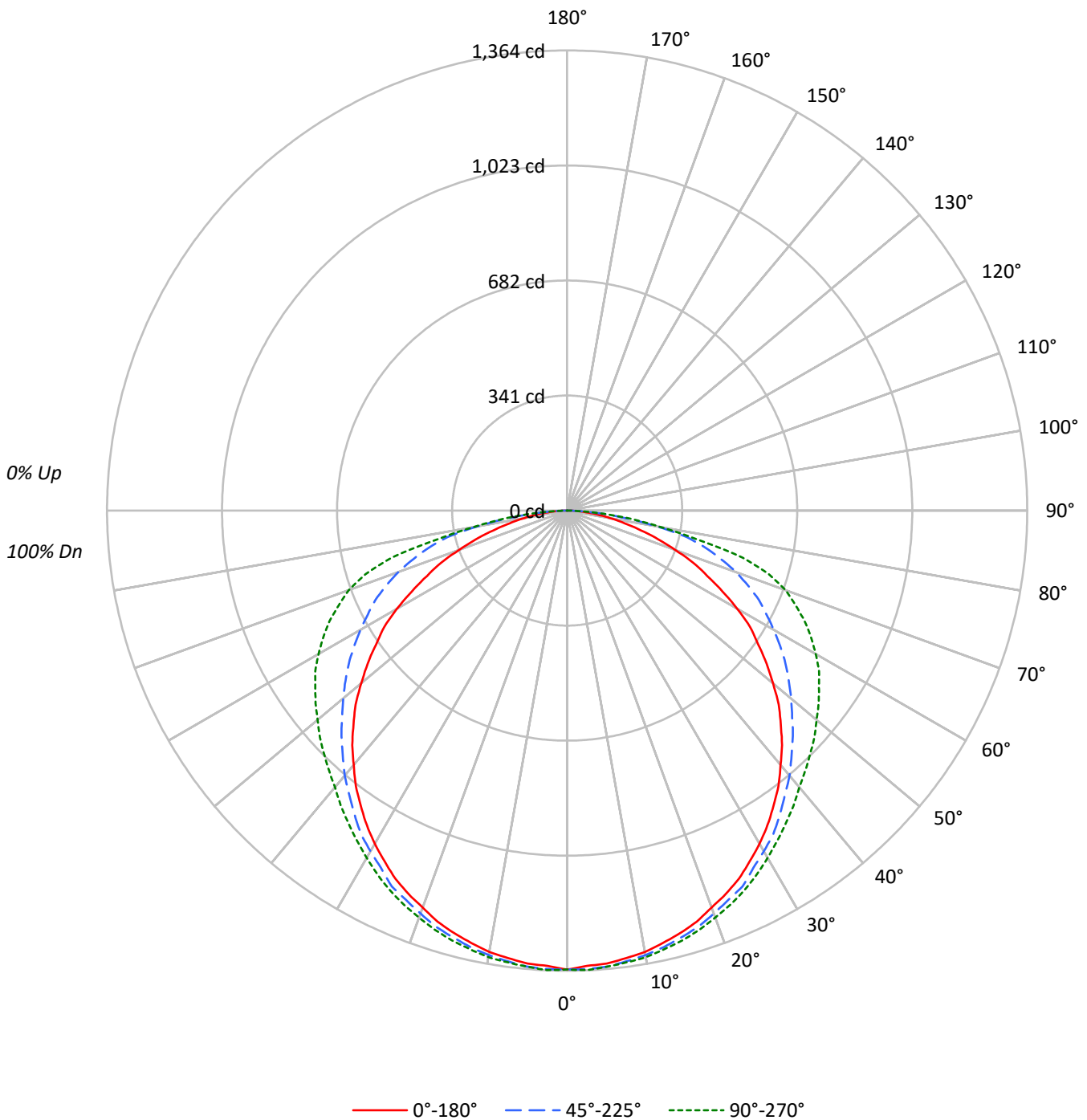
Input Watts (W): 44.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	92	89	92	89	86	88	86	84	82
2	97	88	81	75	95	86	80	74	83	77	72	80	75	71	76	72	69	67
3	88	77	68	61	86	75	67	61	72	65	60	70	64	59	67	62	58	55
4	80	68	59	51	78	66	58	51	64	56	50	61	55	50	59	54	49	47
5	74	60	51	44	72	59	50	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	44	38	51	43	38	50	43	37	48	42	37	35
7	63	49	40	33	61	48	39	33	47	39	33	45	38	33	44	37	33	31
8	59	45	36	30	57	44	35	30	43	35	29	41	34	29	40	34	29	27
9	55	41	32	27	53	40	32	27	39	32	26	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°	3661	3661	3661
5°	3640	3666	3666
10°	3630	3656	3674
15°	3612	3648	3674
20°	3585	3640	3677
25°	3575	3651	3689
30°	3544	3623	3692
35°	3506	3611	3715
40°	3458	3603	3760
45°	3407	3601	3879
50°	3334	3628	4041
55°	3243	3707	4274
60°	3138	3806	4578
65°	2921	3996	4949
70°	2682	4186	5414
75°	2352	4405	5598
80°	2024	4197	4393
85°	1769	3051	3344



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	128.7	3.0
10°-20°	369.5	8.5
20°-30°	563.7	13.0
30°-40°	688.3	15.9
40°-50°	735.9	17.0
50°-60°	710.3	16.4
60°-70°	611.5	14.1
70°-80°	413.7	9.6
80°-90°	109.2	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°	1061.8	24.5
0°-40°	1750.1	40.4
0°-60°	3196.3	73.8
0°-90°	4330.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4330.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1360	1360	1360	1360	1360	
5°	1348	1351	1357	1357	1357	128
15°	1297	1300	1309	1316	1319	366
25°	1204	1211	1230	1236	1242	554
35°	1067	1077	1099	1121	1131	668
45°	895	911	946	994	1019	691
55°	691	714	790	870	911	619
65°	459	503	628	726	777	456
75°	226	300	424	510	538	243
85°	57	80	99	102	108	65
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1360.3	1360.3	1360.3	1360.3	1360.3
2.5°	1350.8	1353.9	1360.3	1360.3	1363.5
5°	1347.6	1350.8	1357.1	1357.1	1357.1
7.5°	1338.0	1341.2	1347.6	1350.8	1350.8
10°	1328.5	1331.6	1338.0	1341.2	1344.4
12.5°	1312.5	1315.7	1325.3	1331.6	1331.6
15°	1296.6	1299.8	1309.3	1315.7	1318.9
17.5°	1277.5	1283.9	1293.4	1299.8	1303.0
20°	1252.0	1258.4	1271.1	1280.7	1283.9
22.5°	1229.7	1236.1	1248.8	1258.4	1264.7
25°	1204.2	1210.6	1229.7	1236.1	1242.4
27.5°	1172.4	1178.7	1194.7	1207.4	1217.0
30°	1140.5	1146.9	1166.0	1181.9	1188.3
32.5°	1105.5	1115.0	1137.3	1150.1	1159.6
35°	1067.2	1076.8	1099.1	1121.4	1130.9
37.5°	1029.0	1038.6	1060.9	1089.5	1102.3
40°	984.4	997.1	1025.8	1064.0	1070.4
42.5°	943.0	958.9	984.4	1029.0	1044.9
45°	895.2	911.1	946.2	994.0	1019.4
47.5°	850.6	866.5	904.8	962.1	994.0
50°	796.4	818.7	866.5	933.4	965.3
52.5°	745.5	764.6	828.3	901.6	939.8
55°	691.3	713.6	790.1	869.7	911.1
57.5°	643.5	662.6	748.7	837.9	885.6
60°	583.0	608.5	707.2	802.8	850.6
62.5°	519.3	557.5	665.8	764.6	815.6
65°	458.7	503.3	627.6	726.4	777.3
67.5°	404.6	452.4	579.8	684.9	732.7
70°	340.9	401.4	532.0	634.0	688.1
72.5°	283.5	350.4	477.9	579.8	627.6
75°	226.2	299.5	423.7	509.7	538.4
77.5°	175.2	245.3	363.2	388.7	391.8
80°	130.6	194.3	270.8	274.0	283.5
82.5°	89.2	137.0	175.2	191.1	194.3
85°	57.3	79.6	98.8	101.9	108.3
87.5°	25.5	28.7	35.0	31.9	31.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)