

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: P390504

Luminaire Tested: **22CZ2-60VHE-HRP-UNV-L935-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: P390504  
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-SDWPD1-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: 4278.3 lumens  
Efficiency: N/A  
Efficacy: 97.0 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

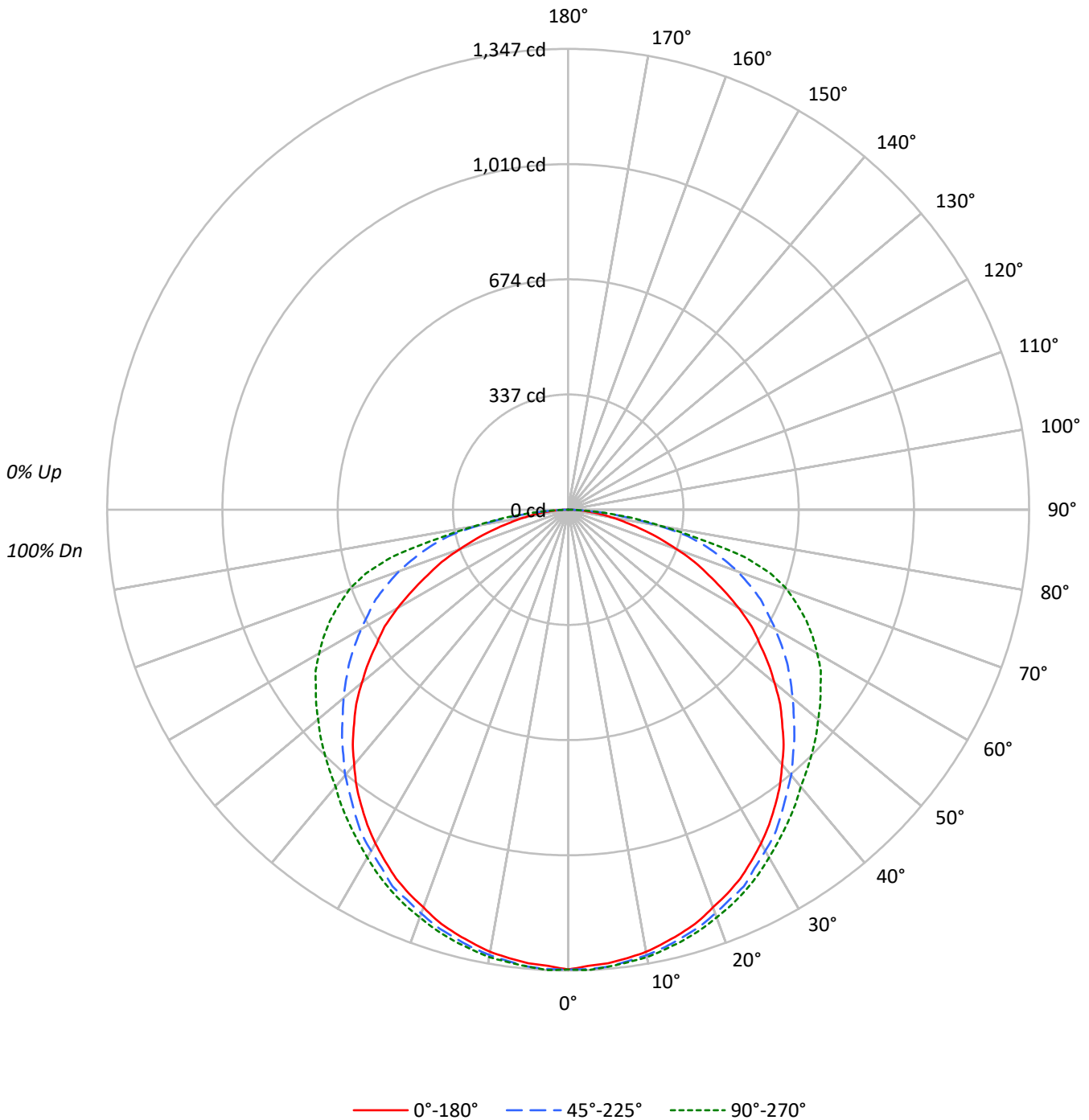
Input Watts (W): 44.1  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	3616	3616	3616
5°	3596	3622	3622
10°	3586	3612	3629
15°	3568	3604	3630
20°	3542	3596	3632
25°	3532	3607	3644
30°	3501	3579	3648
35°	3463	3567	3670
40°	3416	3560	3715
45°	3366	3557	3833
50°	3294	3584	3992
55°	3204	3662	4223
60°	3100	3760	4522
65°	2886	3948	4890
70°	2650	4135	5349
75°	2324	4352	5530
80°	1999	4145	4341
85°	1751	3013	3304



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	127.1	3.0
10°-20°	365.0	8.5
20°-30°	556.9	13.0
30°-40°	679.9	15.9
40°-50°	727.0	17.0
50°-60°	701.7	16.4
60°-70°	604.1	14.1
70°-80°	408.7	9.6
80°-90°	107.8	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°	1049.0	24.5
0°-40°	1728.9	40.4
0°-60°	3157.7	73.8
0°-90°	4278.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4278.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1344	1344	1344	1344	1344	
5°	1331	1334	1341	1341	1341	126
15°	1281	1284	1294	1300	1303	361
25°	1190	1196	1215	1221	1227	548
35°	1054	1064	1086	1108	1117	660
45°	884	900	935	982	1007	683
55°	683	705	780	859	900	612
65°	453	497	620	718	768	451
75°	224	296	419	504	532	240
85°	57	79	98	101	107	64
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1343.9	1343.9	1343.9	1343.9	1343.9
2.5°	1334.4	1337.6	1343.9	1343.9	1347.0
5°	1331.3	1334.4	1340.7	1340.7	1340.7
7.5°	1321.9	1325.0	1331.3	1334.4	1334.4
10°	1312.4	1315.6	1321.9	1325.0	1328.2
12.5°	1296.7	1299.8	1309.3	1315.6	1315.6
15°	1280.9	1284.1	1293.5	1299.8	1303.0
17.5°	1262.1	1268.4	1277.8	1284.1	1287.2
20°	1236.9	1243.2	1255.8	1265.2	1268.4
22.5°	1214.9	1221.1	1233.7	1243.2	1249.5
25°	1189.7	1196.0	1214.9	1221.1	1227.4
27.5°	1158.2	1164.5	1180.2	1192.8	1202.3
30°	1126.7	1133.0	1151.9	1167.6	1173.9
32.5°	1092.1	1101.5	1123.6	1136.2	1145.6
35°	1054.3	1063.8	1085.8	1107.8	1117.3
37.5°	1016.6	1026.0	1048.0	1076.4	1089.0
40°	972.5	985.1	1013.4	1051.2	1057.5
42.5°	931.6	947.3	972.5	1016.6	1032.3
45°	884.4	900.1	934.7	982.0	1007.1
47.5°	840.3	856.1	893.8	950.5	982.0
50°	786.8	808.9	856.1	922.2	953.6
52.5°	736.5	755.3	818.3	890.7	928.4
55°	683.0	705.0	780.5	859.2	900.1
57.5°	635.8	654.6	739.6	827.7	874.9
60°	576.0	601.1	698.7	793.1	840.3
62.5°	513.0	550.8	657.8	755.3	805.7
65°	453.2	497.3	620.0	717.6	767.9
67.5°	399.7	446.9	572.8	676.7	723.9
70°	336.8	396.6	525.6	626.3	679.8
72.5°	280.1	346.2	472.1	572.8	620.0
75°	223.5	295.8	418.6	503.6	531.9
77.5°	173.1	242.3	358.8	384.0	387.1
80°	129.0	192.0	267.5	270.7	280.1
82.5°	88.1	135.3	173.1	188.8	192.0
85°	56.7	78.7	97.6	100.7	107.0
87.5°	25.2	28.3	34.6	31.5	31.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)