

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: P390122

Luminaire Tested: **22CZ2-20VHE-HRP-UNV-L935-CD1-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: P390122
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: 22CZ2-20VHE-HRP-UNV-L935-CD1-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: 1441.1 lumens
Efficiency: N/A
Efficacy: 101.5 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

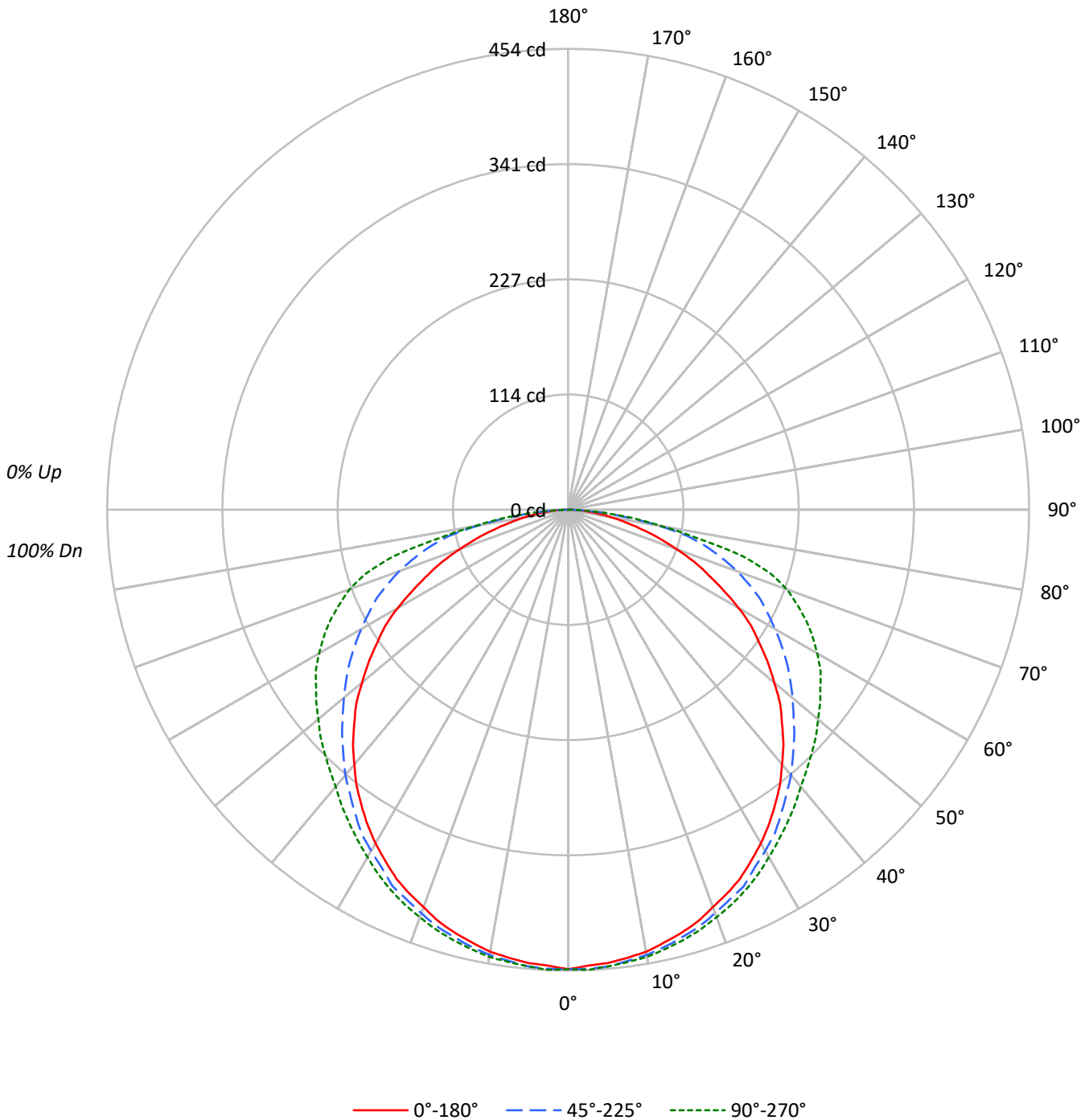
Input Watts (W): 14.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1218	1218	1218
5°	1211	1220	1220
10°	1208	1217	1223
15°	1202	1214	1223
20°	1193	1211	1223
25°	1190	1215	1227
30°	1179	1206	1229
35°	1167	1201	1236
40°	1151	1199	1251
45°	1134	1198	1291
50°	1109	1207	1345
55°	1079	1233	1422
60°	1044	1266	1524
65°	972	1330	1647
70°	892	1393	1802
75°	783	1466	1863
80°	674	1396	1463
85°	590	1016	1112



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	42.8	3.0
10°-20°	122.9	8.5
20°-30°	187.6	13.0
30°-40°	229.0	15.9
40°-50°	244.9	17.0
50°-60°	236.4	16.4
60°-70°	203.5	14.1
70°-80°	137.7	9.6
80°-90°	36.3	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°	353.3	24.5
0°-40°	582.4	40.4
0°-60°	1063.6	73.8
0°-90°	1441.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1441.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	453	453	453	453	453	
5°	448	450	452	452	452	43
15°	432	432	436	438	439	122
25°	401	403	409	411	413	184
35°	355	358	366	373	376	222
45°	298	303	315	331	339	230
55°	230	238	263	289	303	206
65°	153	168	209	242	259	152
75°	75	100	141	170	179	81
85°	19	26	33	34	36	22
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	452.7	452.7	452.7	452.7	452.7
2.5°	449.5	450.6	452.7	452.7	453.7
5°	448.4	449.5	451.6	451.6	451.6
7.5°	445.3	446.3	448.4	449.5	449.5
10°	442.1	443.1	445.3	446.3	447.4
12.5°	436.8	437.8	441.0	443.1	443.1
15°	431.5	432.5	435.7	437.8	438.9
17.5°	425.1	427.2	430.4	432.5	433.6
20°	416.6	418.8	423.0	426.2	427.2
22.5°	409.2	411.3	415.6	418.8	420.9
25°	400.7	402.8	409.2	411.3	413.4
27.5°	390.1	392.2	397.5	401.8	405.0
30°	379.5	381.6	388.0	393.3	395.4
32.5°	367.9	371.0	378.5	382.7	385.9
35°	355.1	358.3	365.7	373.2	376.3
37.5°	342.4	345.6	353.0	362.6	366.8
40°	327.6	331.8	341.4	354.1	356.2
42.5°	313.8	319.1	327.6	342.4	347.7
45°	297.9	303.2	314.9	330.8	339.2
47.5°	283.1	288.4	301.1	320.2	330.8
50°	265.0	272.5	288.4	310.6	321.2
52.5°	248.1	254.4	275.6	300.0	312.7
55°	230.0	237.5	262.9	289.4	303.2
57.5°	214.1	220.5	249.1	278.8	294.7
60°	194.0	202.5	235.3	267.2	283.1
62.5°	172.8	185.5	221.6	254.4	271.4
65°	152.7	167.5	208.8	241.7	258.7
67.5°	134.6	150.5	192.9	227.9	243.8
70°	113.4	133.6	177.0	211.0	229.0
72.5°	94.4	116.6	159.0	192.9	208.8
75°	75.3	99.7	141.0	169.6	179.2
77.5°	58.3	81.6	120.9	129.3	130.4
80°	43.5	64.7	90.1	91.2	94.4
82.5°	29.7	45.6	58.3	63.6	64.7
85°	19.1	26.5	32.9	33.9	36.0
87.5°	8.5	9.5	11.7	10.6	10.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)