

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: P390121

Luminaire Tested: **22CZ2-20VHE-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: P390121
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-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: 1423.2 lumens
Efficiency: N/A
Efficacy: 100.2 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

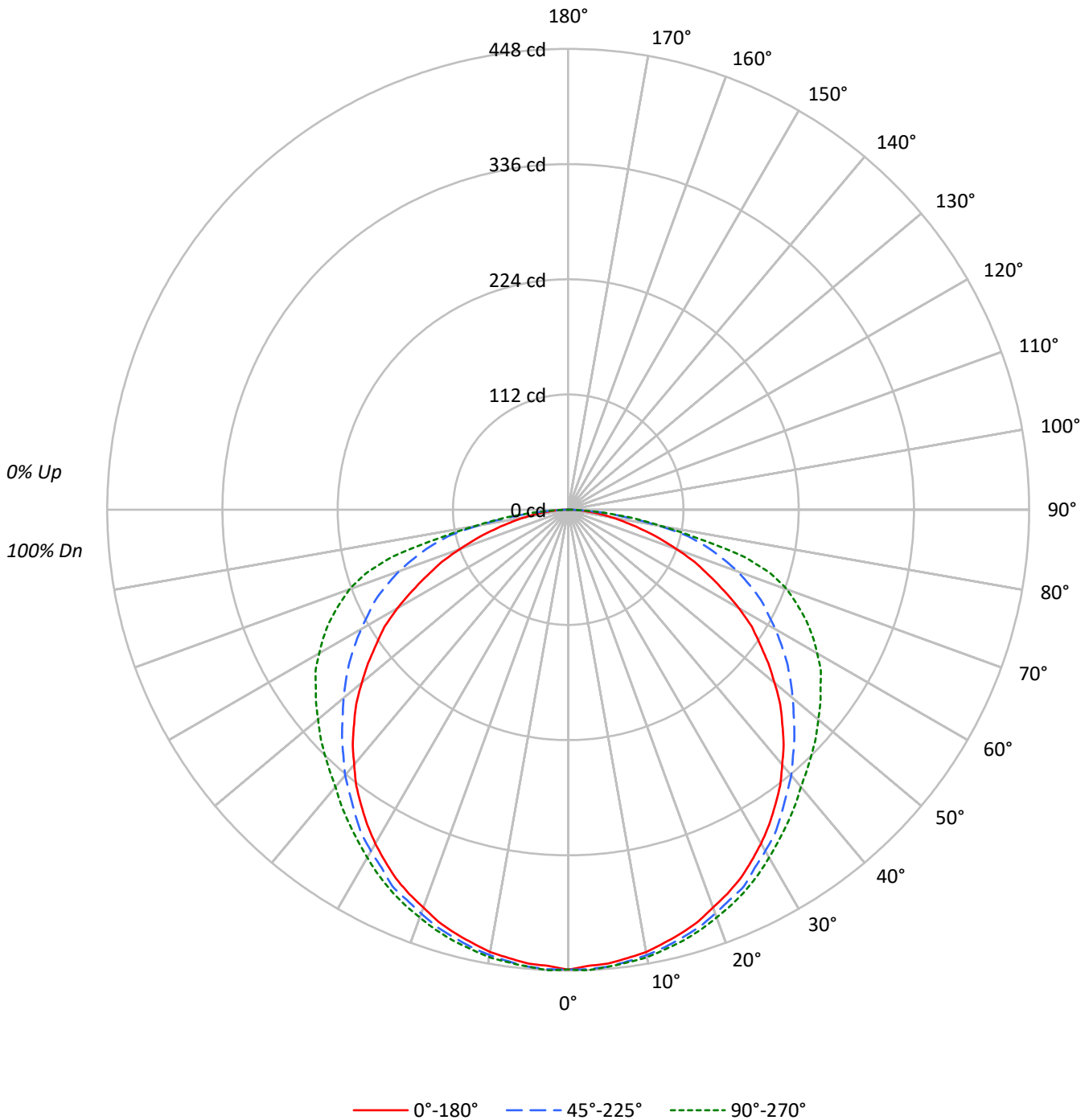
Input Watts (W): 14.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1203	1203	1203
5°	1196	1205	1205
10°	1193	1201	1207
15°	1187	1199	1207
20°	1178	1196	1208
25°	1175	1200	1212
30°	1165	1191	1213
35°	1152	1187	1221
40°	1136	1184	1236
45°	1120	1183	1275
50°	1096	1192	1328
55°	1066	1218	1405
60°	1031	1251	1504
65°	960	1314	1627
70°	881	1375	1779
75°	773	1447	1839
80°	665	1379	1444
85°	580	1003	1099



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	42.3	3.0
10°-20°	121.4	8.5
20°-30°	185.2	13.0
30°-40°	226.2	15.9
40°-50°	241.8	17.0
50°-60°	233.4	16.4
60°-70°	200.9	14.1
70°-80°	135.9	9.6
80°-90°	35.9	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°	348.9	24.5
0°-40°	575.1	40.4
0°-60°	1050.4	73.8
0°-90°	1423.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1423.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	447	447	447	447	447	
5°	443	444	446	446	446	42
15°	426	427	430	432	433	120
25°	396	398	404	406	408	182
35°	351	354	361	368	372	219
45°	294	299	311	327	335	227
55°	227	234	260	286	299	204
65°	151	165	206	239	256	150
75°	74	98	139	168	177	80
85°	19	26	32	34	36	21
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	447.1	447.1	447.1	447.1	447.1
2.5°	443.9	445.0	447.1	447.1	448.1
5°	442.9	443.9	446.0	446.0	446.0
7.5°	439.7	440.8	442.9	443.9	443.9
10°	436.6	437.6	439.7	440.8	441.8
12.5°	431.3	432.4	435.5	437.6	437.6
15°	426.1	427.2	430.3	432.4	433.4
17.5°	419.8	421.9	425.1	427.2	428.2
20°	411.5	413.5	417.7	420.9	421.9
22.5°	404.1	406.2	410.4	413.5	415.6
25°	395.8	397.8	404.1	406.2	408.3
27.5°	385.3	387.4	392.6	396.8	399.9
30°	374.8	376.9	383.2	388.4	390.5
32.5°	363.3	366.4	373.8	378.0	381.1
35°	350.7	353.9	361.2	368.5	371.7
37.5°	338.2	341.3	348.6	358.1	362.2
40°	323.5	327.7	337.1	349.7	351.8
42.5°	309.9	315.1	323.5	338.2	343.4
45°	294.2	299.4	310.9	326.7	335.0
47.5°	279.5	284.8	297.3	316.2	326.7
50°	261.7	269.1	284.8	306.8	317.2
52.5°	245.0	251.3	272.2	296.3	308.9
55°	227.2	234.5	259.6	285.8	299.4
57.5°	211.5	217.8	246.0	275.4	291.1
60°	191.6	200.0	232.4	263.8	279.5
62.5°	170.7	183.2	218.8	251.3	268.0
65°	150.8	165.4	206.3	238.7	255.5
67.5°	133.0	148.7	190.5	225.1	240.8
70°	112.0	131.9	174.8	208.3	226.1
72.5°	93.2	115.2	157.0	190.5	206.3
75°	74.3	98.4	139.2	167.5	176.9
77.5°	57.6	80.6	119.4	127.7	128.8
80°	42.9	63.9	89.0	90.0	93.2
82.5°	29.3	45.0	57.6	62.8	63.9
85°	18.8	26.2	32.5	33.5	35.6
87.5°	8.4	9.4	11.5	10.5	10.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)