

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: P391225

Luminaire Tested: **24CZ2-30VHE-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: P391225
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: 24CZ2-30VHE-HRP-UNV-L935-CD1-SWPD1-U
Description: 2x4 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: 2134.1 lumens
Efficiency: N/A
Efficacy: 104.6 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

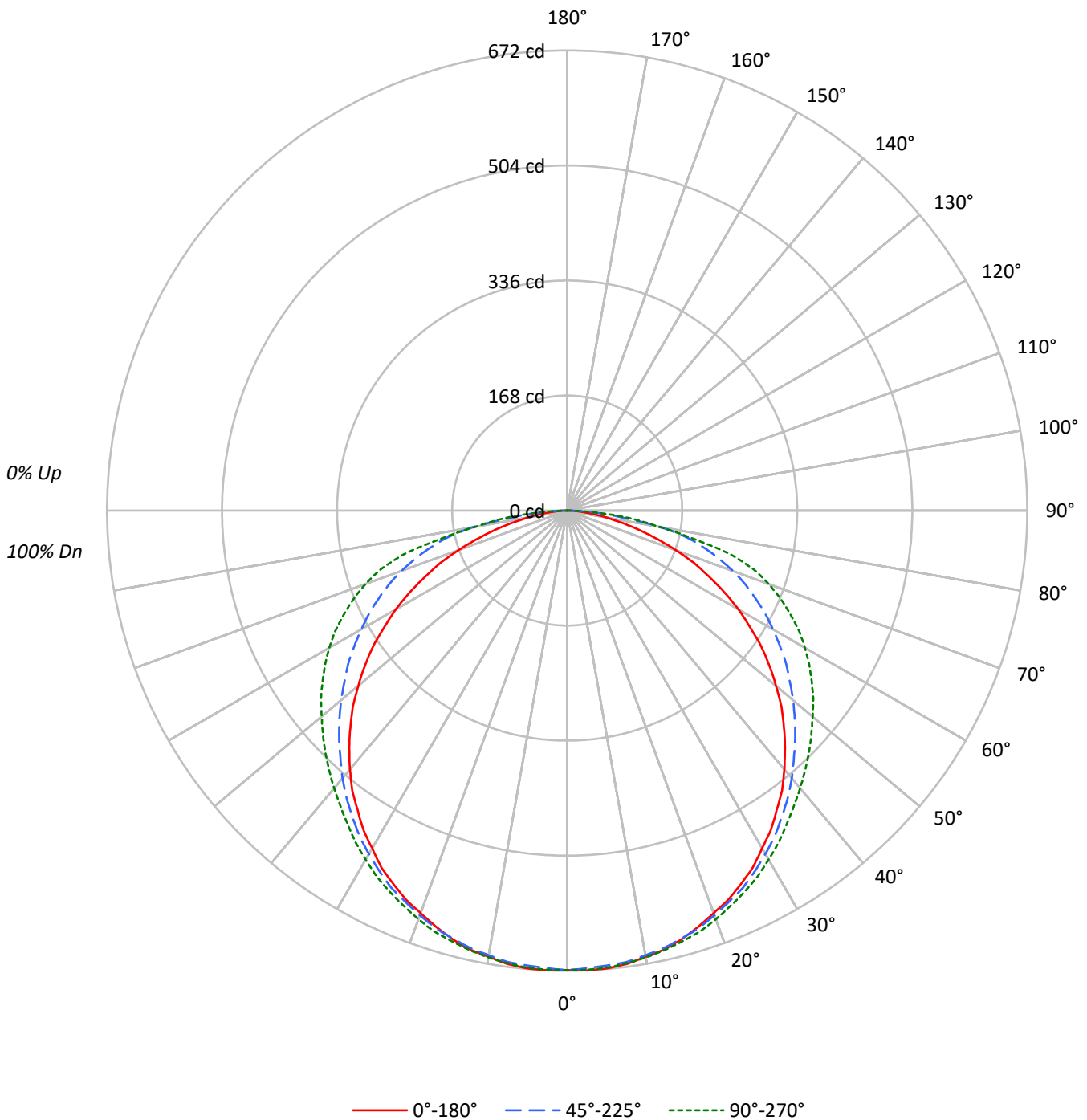
Input Watts (W): 20.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	903	903	903
5°	906	901	905
10°	904	901	905
15°	902	901	907
20°	896	900	909
25°	893	902	912
30°	885	900	914
35°	876	897	918
40°	866	896	930
45°	852	896	951
50°	833	902	979
55°	812	916	1023
60°	778	934	1080
65°	728	967	1146
70°	662	1012	1233
75°	561	1068	1288
80°	443	1075	1041
85°	327	817	915



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	63.7	3.0
10°-20°	183.2	8.6
20°-30°	280.2	13.1
30°-40°	342.5	16.0
40°-50°	365.0	17.1
50°-60°	349.0	16.4
60°-70°	295.7	13.9
70°-80°	198.7	9.3
80°-90°	56.1	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°	527.1	24.7
0°-40°	869.6	40.7
0°-60°	1583.6	74.2
0°-90°	2134.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2134.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	671	671	671	671	671	
5°	671	670	667	670	670	64
15°	648	648	647	652	651	183
25°	601	603	608	613	614	277
35°	534	538	546	557	559	334
45°	448	455	471	491	500	345
55°	346	359	391	421	436	308
65°	229	252	304	344	360	227
75°	108	147	205	240	248	116
85°	21	43	53	57	59	26
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	671.1	671.1	671.1	671.1	671.1
2.5°	672.2	672.2	669.0	671.1	671.1
5°	671.1	670.1	666.9	670.1	670.1
7.5°	667.9	666.9	664.8	667.9	666.9
10°	661.6	661.6	659.5	662.6	662.6
12.5°	656.3	655.2	654.2	658.4	657.4
15°	647.8	647.8	646.8	652.1	651.0
17.5°	637.2	638.3	639.4	643.6	644.7
20°	625.6	627.7	628.8	635.1	635.1
22.5°	615.0	616.1	618.2	624.5	624.5
25°	601.2	603.4	607.6	612.9	614.0
27.5°	587.5	588.5	593.8	601.2	602.3
30°	569.5	572.7	579.0	587.5	588.5
32.5°	553.6	556.8	564.2	572.7	574.8
35°	533.5	537.7	546.2	556.8	558.9
37.5°	515.5	518.7	529.3	540.9	544.1
40°	493.3	499.6	510.2	524.0	529.3
42.5°	471.0	477.4	490.1	508.1	514.4
45°	447.8	455.2	471.0	491.2	499.6
47.5°	424.5	432.9	450.9	474.2	483.8
50°	398.0	408.6	430.8	457.3	467.9
52.5°	372.6	385.3	409.7	439.3	453.1
55°	346.1	358.8	390.6	421.3	436.1
57.5°	316.5	333.4	368.4	403.3	419.2
60°	289.0	304.9	347.2	385.3	401.2
62.5°	259.3	280.5	326.0	366.3	382.1
65°	228.6	251.9	303.8	344.0	359.9
67.5°	201.1	226.5	281.6	321.8	337.7
70°	168.3	200.1	257.2	297.4	313.3
72.5°	137.6	172.5	231.8	271.0	285.8
75°	108.0	147.1	205.4	240.3	247.7
77.5°	80.4	121.7	177.8	192.7	187.4
80°	57.2	97.4	138.7	131.3	134.4
82.5°	37.0	74.1	85.7	97.4	100.6
85°	21.2	43.4	52.9	57.2	59.3
87.5°	9.5	15.9	21.2	21.2	20.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)