

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: P391227

Luminaire Tested: **24CZ2-30VHE-HRP-UNV-L940-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: P391227
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-L940-CD1-SDWPD1-U
Description: 2x4 CRUZE LED TROFFER WITH 4000K, 90 LEDS, AND HRP LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2130.2 lumens
Efficiency: N/A
Efficacy: 104.4 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

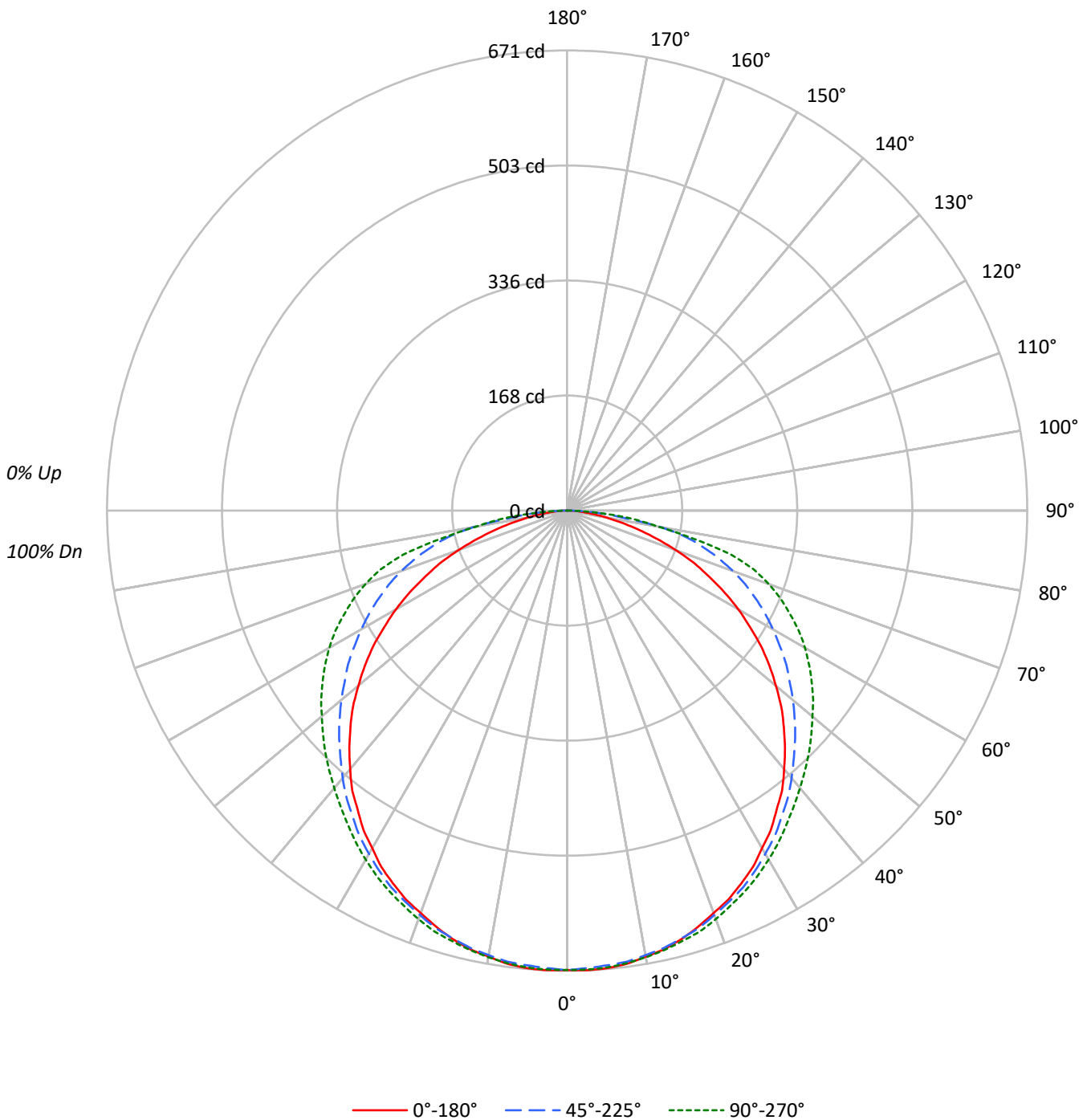
Input Watts (W): 20.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	901	901	901
5°	905	899	903
10°	902	899	904
15°	901	899	905
20°	894	899	908
25°	891	900	910
30°	883	898	913
35°	875	896	916
40°	865	895	928
45°	850	895	949
50°	832	900	978
55°	810	915	1021
60°	776	933	1078
65°	727	965	1144
70°	661	1010	1231
75°	560	1066	1285
80°	442	1072	1040
85°	326	815	914



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	63.5	3.0
10°-20°	182.9	8.6
20°-30°	279.7	13.1
30°-40°	341.9	16.0
40°-50°	364.4	17.1
50°-60°	348.4	16.4
60°-70°	295.1	13.9
70°-80°	198.4	9.3
80°-90°	55.9	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°	526.1	24.7
0°-40°	868.0	40.7
0°-60°	1580.8	74.2
0°-90°	2130.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2130.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	670	670	670	670	670	
5°	670	669	666	669	669	64
15°	647	647	646	651	650	182
25°	600	602	606	612	613	277
35°	532	537	545	556	558	334
45°	447	454	470	490	499	345
55°	346	358	390	420	435	308
65°	228	252	303	343	359	227
75°	108	147	205	240	247	115
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°	669.9	669.9	669.9	669.9	669.9
2.5°	670.9	670.9	667.8	669.9	669.9
5°	669.9	668.8	665.7	668.8	668.8
7.5°	666.7	665.7	663.5	666.7	665.7
10°	660.4	660.4	658.3	661.4	661.4
12.5°	655.1	654.0	653.0	657.2	656.2
15°	646.6	646.6	645.6	650.9	649.8
17.5°	636.1	637.1	638.2	642.4	643.5
20°	624.5	626.6	627.6	634.0	634.0
22.5°	613.9	614.9	617.1	623.4	623.4
25°	600.2	602.3	606.5	611.8	612.8
27.5°	586.4	587.5	592.8	600.2	601.2
30°	568.5	571.6	578.0	586.4	587.5
32.5°	552.6	555.8	563.2	571.6	573.7
35°	532.5	536.8	545.2	555.8	557.9
37.5°	514.6	517.7	528.3	539.9	543.1
40°	492.4	498.7	509.3	523.0	528.3
42.5°	470.2	476.5	489.2	507.2	513.5
45°	446.9	454.3	470.2	490.3	498.7
47.5°	423.7	432.2	450.1	473.4	482.9
50°	397.3	407.8	430.0	456.5	467.0
52.5°	371.9	384.6	408.9	438.5	452.2
55°	345.5	358.2	389.9	420.5	435.3
57.5°	315.9	332.8	367.7	402.6	418.4
60°	288.5	304.3	346.6	384.6	400.5
62.5°	258.9	280.0	325.4	365.6	381.4
65°	228.2	251.5	303.2	343.4	359.2
67.5°	200.8	226.1	281.1	321.2	337.1
70°	168.0	199.7	256.8	296.9	312.8
72.5°	137.4	172.2	231.4	270.5	285.3
75°	107.8	146.9	205.0	239.8	247.2
77.5°	80.3	121.5	177.5	192.3	187.0
80°	57.1	97.2	138.4	131.0	134.2
82.5°	37.0	74.0	85.6	97.2	100.4
85°	21.1	43.3	52.8	57.1	59.2
87.5°	9.5	15.8	21.1	21.1	20.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)