

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: P391231

Luminaire Tested: **24CZ2-30VHE-HRP-UNV-L950-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: P391231  
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-L950-CD1-SWPD1-U  
Description: 2x4 CRUZE LED TROFFER WITH 5000K, 90 LEDS, AND HRP LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2288.6 lumens  
Efficiency: N/A  
Efficacy: 112.2 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

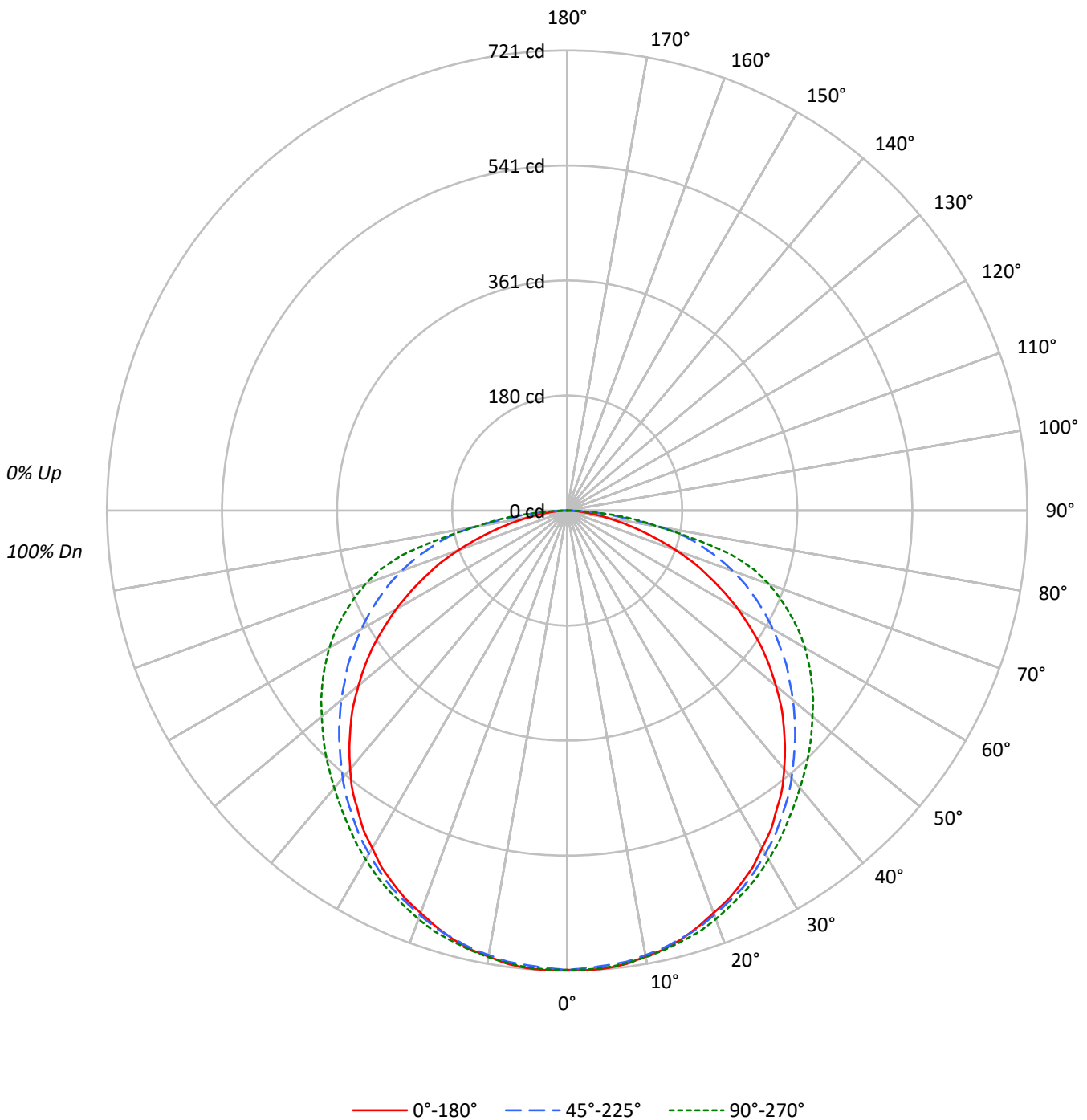
Input Watts (W): 20.4  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	68	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°	968	968	968
5°	972	966	971
10°	969	966	971
15°	968	966	972
20°	961	965	975
25°	957	967	977
30°	949	965	981
35°	940	962	985
40°	929	961	997
45°	914	961	1020
50°	893	967	1050
55°	871	983	1097
60°	834	1002	1158
65°	781	1037	1229
70°	710	1085	1322
75°	602	1145	1381
80°	475	1152	1117
85°	350	877	982



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	68.3	3.0
10°-20°	196.5	8.6
20°-30°	300.5	13.1
30°-40°	367.3	16.0
40°-50°	391.5	17.1
50°-60°	374.3	16.4
60°-70°	317.1	13.9
70°-80°	213.1	9.3
80°-90°	60.1	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°	565.2	24.7
0°-40°	932.5	40.7
0°-60°	1698.3	74.2
0°-90°	2288.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2288.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	720	720	720	720	720	
5°	720	719	715	719	719	68
15°	695	695	694	699	698	196
25°	645	647	652	657	658	297
35°	572	577	586	597	599	358
45°	480	488	505	527	536	370
55°	371	385	419	452	468	331
65°	245	270	326	369	386	243
75°	116	158	220	258	266	124
85°	23	46	57	61	64	28
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	719.7	719.7	719.7	719.7	719.7
2.5°	720.8	720.8	717.4	719.7	719.7
5°	719.7	718.6	715.2	718.6	718.6
7.5°	716.3	715.2	712.9	716.3	715.2
10°	709.5	709.5	707.2	710.6	710.6
12.5°	703.8	702.7	701.5	706.1	704.9
15°	694.7	694.7	693.6	699.3	698.1
17.5°	683.4	684.5	685.6	690.2	691.3
20°	670.9	673.2	674.3	681.1	681.1
22.5°	659.5	660.7	662.9	669.8	669.8
25°	644.8	647.0	651.6	657.3	658.4
27.5°	630.0	631.2	636.8	644.8	645.9
30°	610.7	614.1	620.9	630.0	631.2
32.5°	593.7	597.1	605.0	614.1	616.4
35°	572.1	576.7	585.7	597.1	599.4
37.5°	552.8	556.2	567.6	580.1	583.5
40°	529.0	535.8	547.2	561.9	567.6
42.5°	505.2	512.0	525.6	544.9	551.7
45°	480.2	488.1	505.2	526.7	535.8
47.5°	455.2	464.3	483.6	508.6	518.8
50°	426.8	438.2	462.0	490.4	501.7
52.5°	399.6	413.2	439.3	471.1	485.9
55°	371.2	384.8	418.9	451.8	467.7
57.5°	339.4	357.6	395.0	432.5	449.5
60°	309.9	326.9	372.3	413.2	430.2
62.5°	278.1	300.8	349.6	392.8	409.8
65°	245.2	270.2	325.8	368.9	386.0
67.5°	215.7	242.9	302.0	345.1	362.1
70°	180.5	214.5	275.8	319.0	336.0
72.5°	147.6	185.0	248.6	290.6	306.5
75°	115.8	157.8	220.2	257.7	265.6
77.5°	86.3	130.5	190.7	206.6	200.9
80°	61.3	104.4	148.7	140.8	144.2
82.5°	39.7	79.5	91.9	104.4	107.8
85°	22.7	46.5	56.8	61.3	63.6
87.5°	10.2	17.0	22.7	22.7	21.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)