

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: P391270

Luminaire Tested: **24CZ2-35VHE-HRP-UNV-L930-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: P391270  
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: 24CZ2-35VHE-HRP-UNV-L930-CD1-SWPD1-U  
Description: 2x4 CRUZE LED TROFFER WITH 3000K, 90 LEDS, AND HRP LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2438.8 lumens  
Efficiency: N/A  
Efficacy: 107.0 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

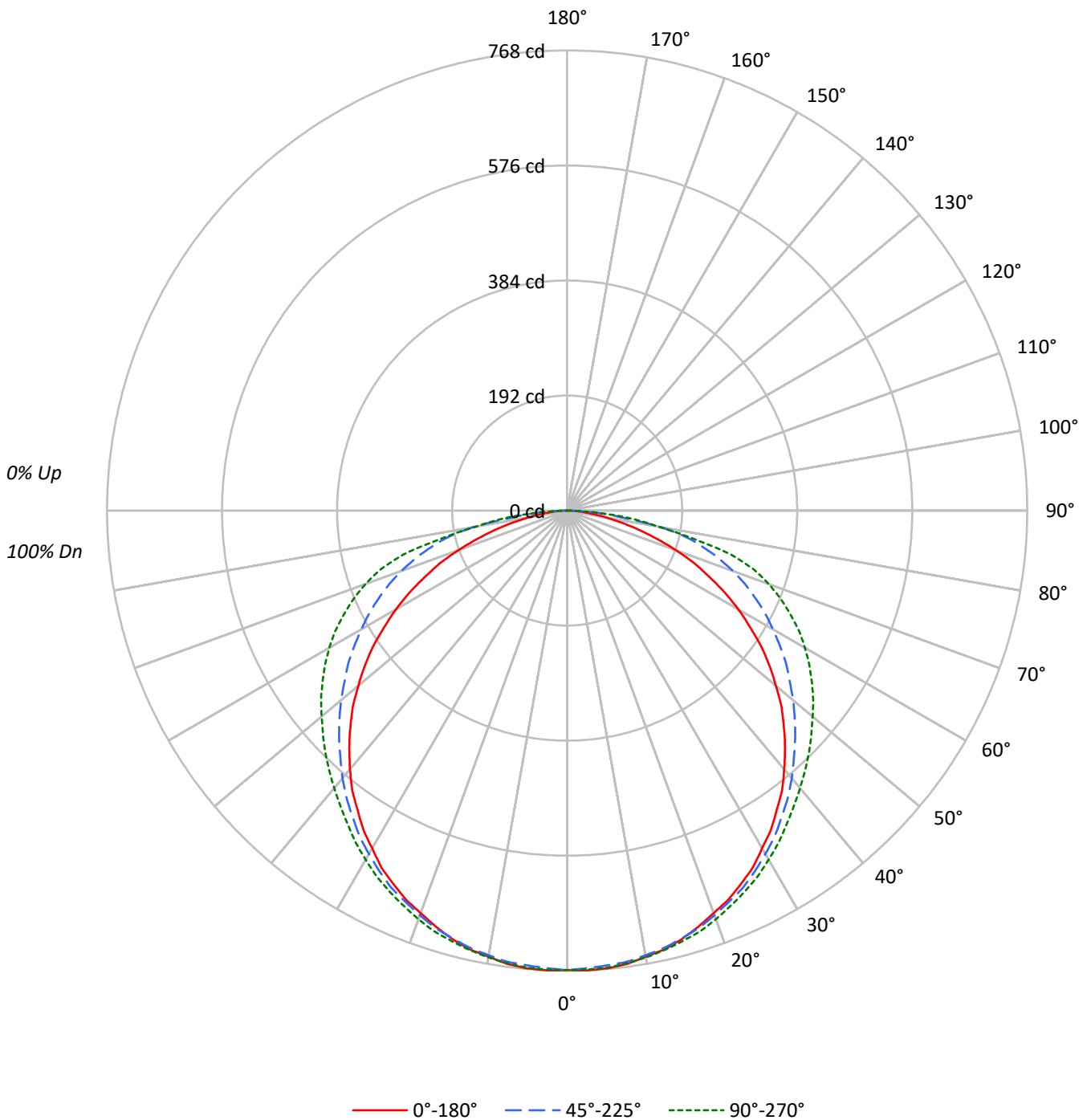
Input Watts (W): 22.8  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	1032	1032	1032
5°	1036	1029	1034
10°	1033	1030	1035
15°	1031	1030	1036
20°	1024	1029	1039
25°	1020	1031	1042
30°	1011	1028	1045
35°	1001	1025	1049
40°	990	1024	1062
45°	974	1024	1087
50°	952	1030	1119
55°	928	1047	1169
60°	889	1068	1234
65°	832	1105	1309
70°	756	1157	1409
75°	642	1220	1472
80°	506	1228	1190
85°	374	934	1045



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	72.7	3.0
10°-20°	209.4	8.6
20°-30°	320.2	13.1
30°-40°	391.4	16.0
40°-50°	417.2	17.1
50°-60°	398.9	16.4
60°-70°	337.9	13.9
70°-80°	227.1	9.3
80°-90°	64.1	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°	602.3	24.7
0°-40°	993.7	40.7
0°-60°	1809.8	74.2
0°-90°	2438.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2438.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	767	767	767	767	767	
5°	767	766	762	766	766	73
15°	740	740	739	745	744	209
25°	687	690	694	700	702	317
35°	610	614	624	636	639	382
45°	512	520	538	561	571	395
55°	396	410	446	482	498	352
65°	261	288	347	393	411	259
75°	123	168	235	275	283	132
85°	24	50	60	65	68	30
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	766.9	766.9	766.9	766.9	766.9
2.5°	768.1	768.1	764.5	766.9	766.9
5°	766.9	765.7	762.1	765.7	765.7
7.5°	763.3	762.1	759.7	763.3	762.1
10°	756.0	756.0	753.6	757.3	757.3
12.5°	750.0	748.8	747.6	752.4	751.2
15°	740.3	740.3	739.1	745.2	743.9
17.5°	728.2	729.4	730.6	735.5	736.7
20°	714.9	717.3	718.5	725.8	725.8
22.5°	702.8	704.0	706.4	713.7	713.7
25°	687.1	689.5	694.4	700.4	701.6
27.5°	671.4	672.6	678.6	687.1	688.3
30°	650.8	654.4	661.7	671.4	672.6
32.5°	632.7	636.3	644.8	654.4	656.9
35°	609.7	614.5	624.2	636.3	638.7
37.5°	589.1	592.7	604.8	618.1	621.8
40°	563.7	571.0	583.1	598.8	604.8
42.5°	538.3	545.6	560.1	580.6	587.9
45°	511.7	520.2	538.3	561.3	571.0
47.5°	485.1	494.8	515.3	541.9	552.8
50°	454.8	466.9	492.3	522.6	534.7
52.5°	425.8	440.3	468.1	502.0	517.7
55°	395.6	410.1	446.4	481.5	498.4
57.5°	361.7	381.0	421.0	460.9	479.0
60°	330.2	348.4	396.8	440.3	458.5
62.5°	296.4	320.6	372.6	418.5	436.7
65°	261.3	287.9	347.2	393.1	411.3
67.5°	229.8	258.9	321.8	367.7	385.9
70°	192.3	228.6	294.0	339.9	358.1
72.5°	157.3	197.2	264.9	309.7	326.6
75°	123.4	168.1	234.7	274.6	283.1
77.5°	91.9	139.1	203.2	220.2	214.1
80°	65.3	111.3	158.5	150.0	153.6
82.5°	42.3	84.7	98.0	111.3	114.9
85°	24.2	49.6	60.5	65.3	67.7
87.5°	10.9	18.1	24.2	24.2	23.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)