

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: P391279

Luminaire Tested: **24CZ2-35VHE-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: P391279  
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-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: 2680.1 lumens  
Efficiency: N/A  
Efficacy: 117.5 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

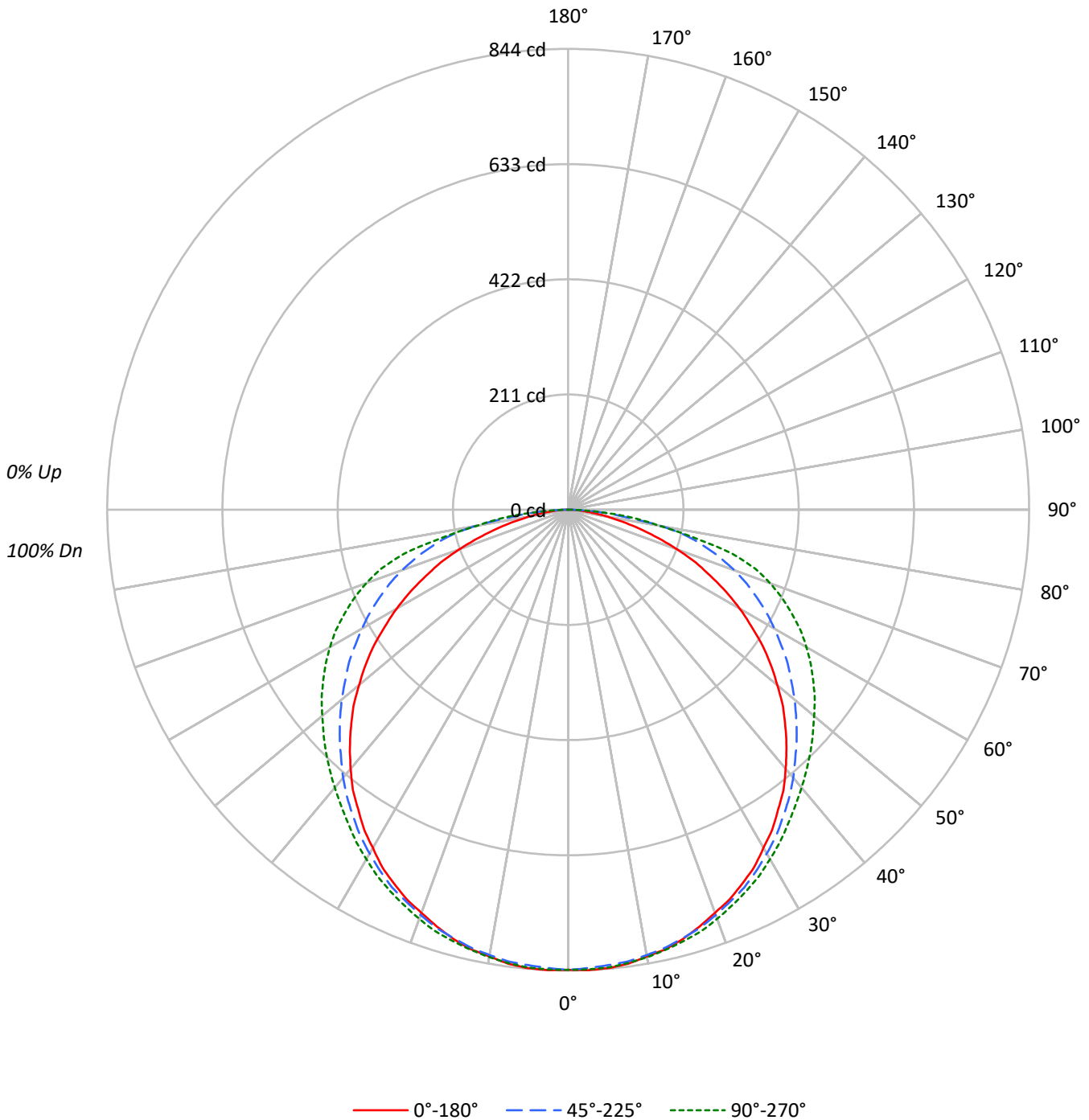
Input Watts (W): 22.8  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	1134	1134	1134
5°	1138	1131	1137
10°	1135	1132	1137
15°	1133	1131	1139
20°	1125	1131	1142
25°	1121	1133	1145
30°	1111	1130	1148
35°	1101	1127	1153
40°	1088	1126	1167
45°	1070	1126	1194
50°	1046	1132	1230
55°	1020	1151	1285
60°	977	1173	1356
65°	914	1215	1439
70°	832	1271	1548
75°	705	1341	1617
80°	556	1349	1308
85°	411	1027	1149



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	79.9	3.0
10°-20°	230.1	8.6
20°-30°	351.9	13.1
30°-40°	430.1	16.0
40°-50°	458.4	17.1
50°-60°	438.3	16.4
60°-70°	371.3	13.9
70°-80°	249.6	9.3
80°-90°	70.4	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°	661.9	24.7
0°-40°	1092.0	40.7
0°-60°	1988.8	74.2
0°-90°	2680.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2680.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	843	843	843	843	843	
5°	843	842	838	842	842	80
15°	814	814	812	819	818	229
25°	755	758	763	770	771	348
35°	670	675	686	699	702	420
45°	562	572	592	617	628	434
55°	435	451	490	529	548	387
65°	287	316	382	432	452	285
75°	136	185	258	302	311	145
85°	27	54	66	72	74	33
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	842.8	842.8	842.8	842.8	842.8
2.5°	844.1	844.1	840.2	842.8	842.8
5°	842.8	841.5	837.5	841.5	841.5
7.5°	838.8	837.5	834.8	838.8	837.5
10°	830.9	830.9	828.2	832.2	832.2
12.5°	824.2	822.9	821.5	826.9	825.5
15°	813.6	813.6	812.2	818.9	817.6
17.5°	800.3	801.6	802.9	808.3	809.6
20°	785.7	788.3	789.6	797.6	797.6
22.5°	772.4	773.7	776.3	784.3	784.3
25°	755.1	757.7	763.1	769.7	771.0
27.5°	737.8	739.1	745.8	755.1	756.4
30°	715.2	719.2	727.2	737.8	739.1
32.5°	695.3	699.2	708.5	719.2	721.8
35°	670.0	675.3	686.0	699.2	701.9
37.5°	647.4	651.4	664.7	679.3	683.3
40°	619.5	627.5	640.8	658.0	664.7
42.5°	591.6	599.5	615.5	638.1	646.1
45°	562.3	571.6	591.6	616.8	627.5
47.5°	533.1	543.7	566.3	595.6	607.5
50°	499.8	513.1	541.0	574.3	587.6
52.5°	467.9	483.9	514.5	551.7	569.0
55°	434.7	450.7	490.5	529.1	547.7
57.5°	397.5	418.7	462.6	506.5	526.4
60°	362.9	382.9	436.0	483.9	503.8
62.5°	325.7	352.3	409.4	460.0	479.9
65°	287.1	316.4	381.5	432.0	452.0
67.5°	252.6	284.5	353.6	404.1	424.1
70°	211.4	251.2	323.0	373.6	393.5
72.5°	172.8	216.7	291.1	340.3	358.9
75°	135.6	184.8	257.9	301.8	311.1
77.5°	101.0	152.9	223.3	241.9	235.3
80°	71.8	122.3	174.1	164.8	168.8
82.5°	46.5	93.1	107.7	122.3	126.3
85°	26.6	54.5	66.5	71.8	74.4
87.5°	12.0	19.9	26.6	26.6	25.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)