

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: P389696

Luminaire Tested: **24CZ2-30VHE-S-UNV-L950-CD1-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: P389696  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-1)  
Test Lab: INNOVATIONS CENTER(G3)  
Issue Date: 2/28/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ2-30VHE-S-UNV-L950-CD1-U  
Description: 2x4 CRUZE LED TROFFER WITH 5000K, 90 LEDS, AND SMOOTH LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2868.6 lumens  
Efficiency: N/A  
Efficacy: 140.6 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

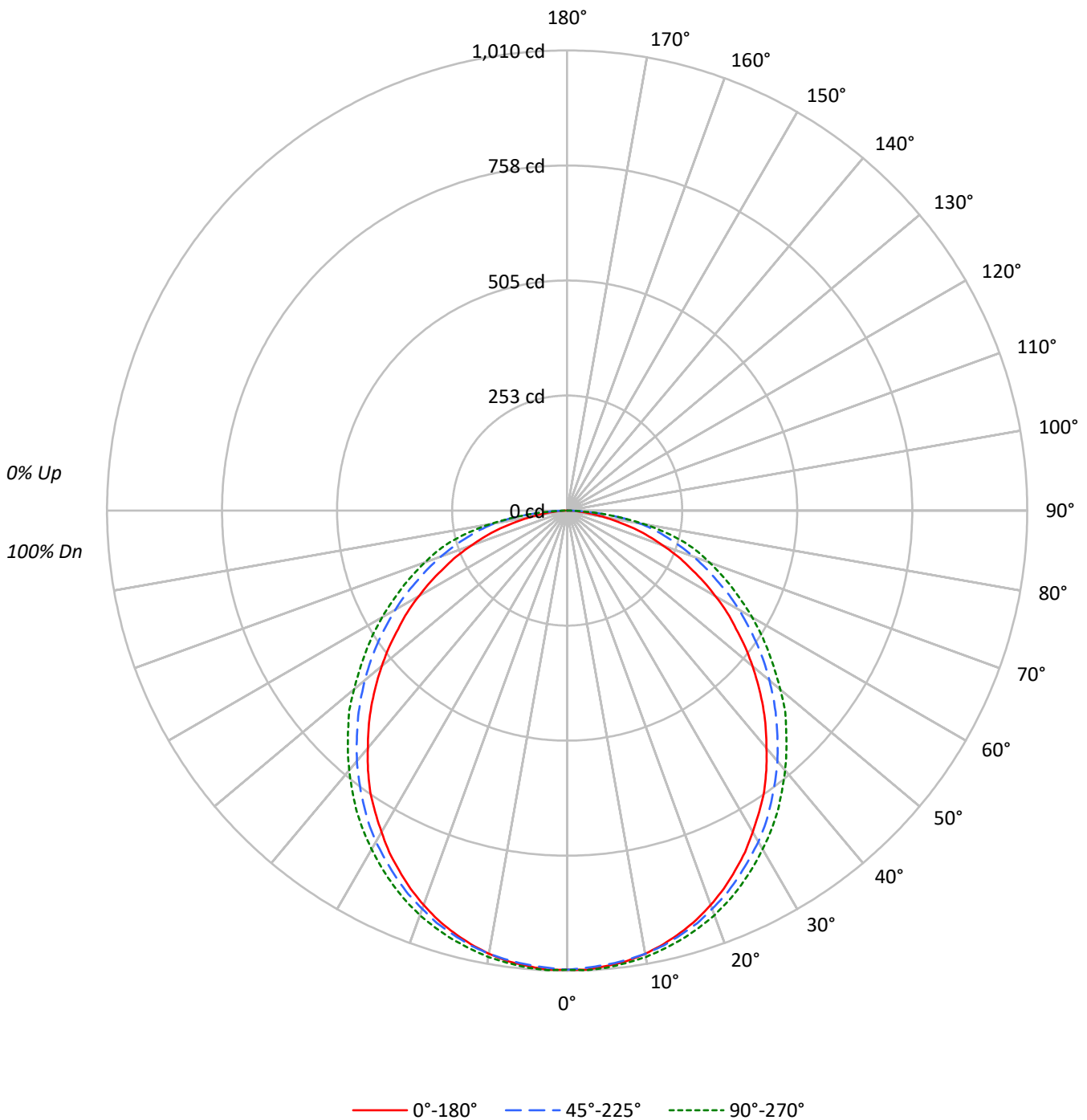
Input Watts (W): 20.4  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	99	95	106	101	97	93	97	93	90	93	90	88	89	87	85	83
2	98	90	83	77	96	88	81	76	84	79	74	81	76	72	78	74	71	69
3	89	79	70	64	87	77	69	63	74	67	62	71	66	61	69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53	63	57	52	61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42
6	70	56	47	40	68	55	47	40	53	46	40	52	45	40	50	44	39	37
7	64	51	42	36	63	50	42	36	48	41	35	47	40	35	46	39	35	33
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29
9	56	43	34	29	55	42	34	29	41	34	28	40	33	28	39	33	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	1356	1356	1356
5°	1355	1351	1360
10°	1349	1349	1359
15°	1337	1343	1357
20°	1319	1332	1353
25°	1295	1319	1345
30°	1266	1304	1333
35°	1238	1283	1323
40°	1195	1261	1307
45°	1157	1236	1293
50°	1112	1213	1278
55°	1062	1190	1265
60°	1013	1172	1263
65°	949	1152	1271
70°	878	1158	1305
75°	787	1180	1379
80°	635	1250	1348
85°	479	1098	1068



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	95.4	3.3
10°-20°	272.6	9.5
20°-30°	409.8	14.3
30°-40°	488.1	17.0
40°-50°	499.6	17.4
50°-60°	449.8	15.7
60°-70°	353.2	12.3
70°-80°	229.2	8.0
80°-90°	70.9	2.5
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°	777.8	27.1
0°-40°	1265.9	44.1
0°-60°	2215.3	77.2
0°-90°	2868.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2868.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1008	1008	1008	1008	1008	
5°	1003	1005	1000	1006	1007	95
15°	960	962	964	972	974	271
25°	872	879	888	903	906	402
35°	754	763	781	800	806	470
45°	608	622	650	674	680	469
55°	453	473	508	534	539	406
65°	298	321	362	392	399	297
75°	151	180	227	258	265	160
85°	31	57	71	69	69	37
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1007.8	1007.8	1007.8	1007.8	1007.8
2.5°	1008.7	1008.7	1004.1	1008.7	1009.6
5°	1003.2	1005.0	1000.5	1005.9	1006.8
7.5°	997.7	997.7	995.0	1000.5	1001.4
10°	987.7	988.6	987.7	994.1	995.0
12.5°	975.0	976.8	977.7	984.1	985.0
15°	959.5	962.2	964.0	972.2	974.0
17.5°	942.2	944.9	949.4	958.6	960.4
20°	921.2	924.8	930.3	942.2	944.9
22.5°	898.4	902.1	911.2	922.1	926.7
25°	872.0	879.3	888.4	903.0	905.7
27.5°	845.6	851.9	863.8	879.3	882.9
30°	814.6	824.6	839.2	854.7	858.3
32.5°	784.5	794.5	811.9	828.3	832.8
35°	753.5	762.7	780.9	800.0	805.5
37.5°	718.0	729.8	749.9	769.0	774.5
40°	680.6	695.2	718.0	738.1	744.4
42.5°	645.1	660.6	683.4	705.2	712.5
45°	607.8	622.3	649.7	674.3	679.7
47.5°	569.5	585.9	615.0	639.6	648.8
50°	531.2	548.5	579.5	605.0	610.5
52.5°	492.9	511.2	544.0	571.3	574.0
55°	452.9	472.9	507.5	533.9	539.4
57.5°	416.4	433.7	471.1	498.4	504.8
60°	376.3	395.4	435.5	461.1	469.3
62.5°	338.0	358.1	400.0	425.5	432.8
65°	298.0	320.7	361.7	391.8	399.1
67.5°	263.3	285.2	328.9	358.1	365.4
70°	223.2	247.8	294.3	324.4	331.7
72.5°	188.6	214.1	260.6	289.8	300.7
75°	151.3	180.4	226.9	257.9	265.2
77.5°	114.8	148.5	195.9	219.6	219.6
80°	82.0	117.5	161.3	172.2	174.0
82.5°	53.8	88.4	119.4	118.5	118.5
85°	31.0	57.4	71.1	69.2	69.2
87.5°	11.8	23.7	25.5	25.5	24.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)