

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: P391366

Luminaire Tested: **24CZ2-45VHE-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: P391366
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: 24CZ2-45VHE-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: 3153.3 lumens
Efficiency: N/A
Efficacy: 106.5 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

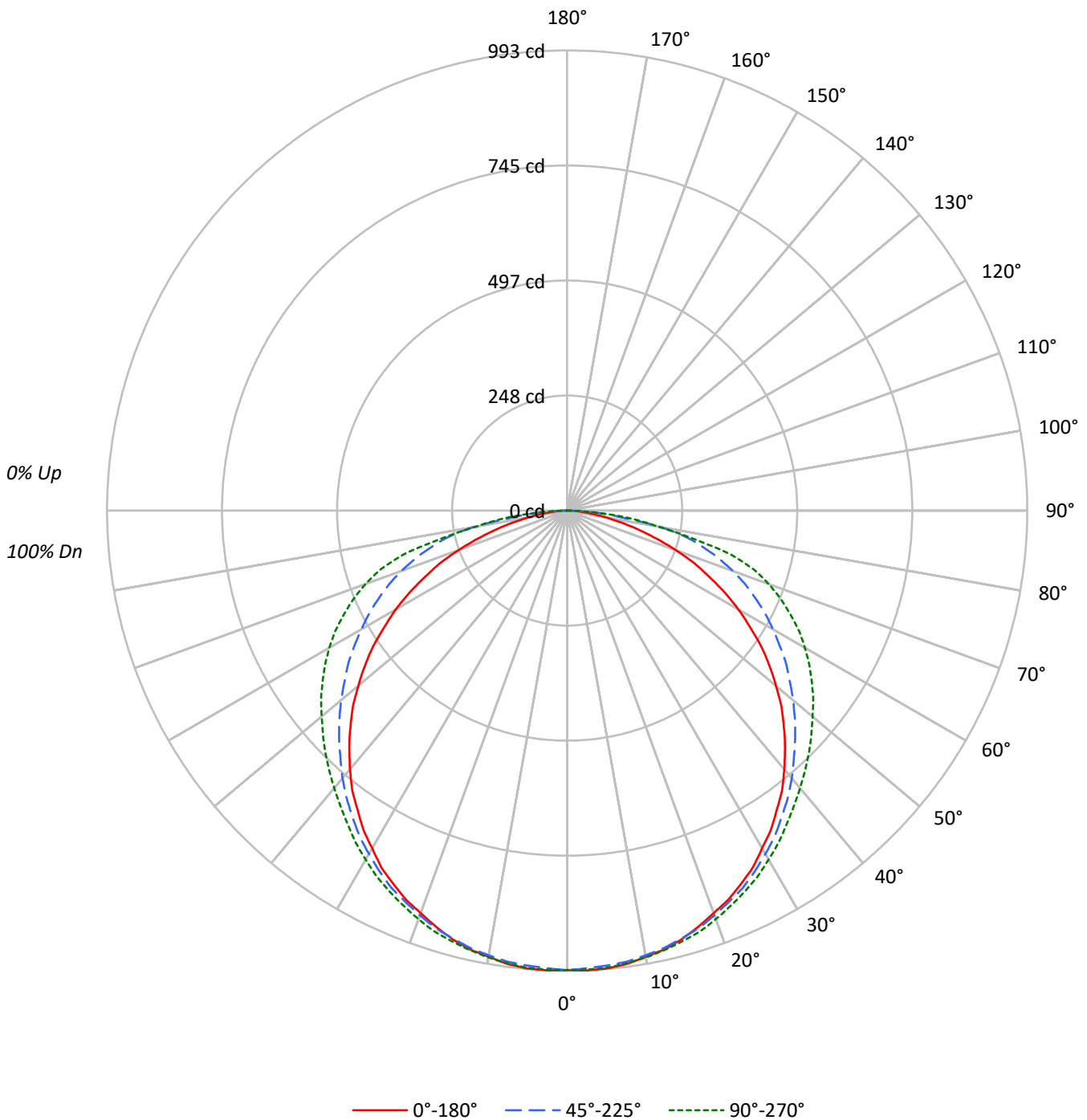
Input Watts (W): 29.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1334	1334	1334
5°	1339	1331	1337
10°	1336	1331	1338
15°	1333	1331	1340
20°	1324	1330	1344
25°	1319	1333	1347
30°	1307	1329	1351
35°	1295	1326	1356
40°	1280	1324	1374
45°	1259	1324	1405
50°	1231	1333	1447
55°	1200	1354	1512
60°	1149	1380	1595
65°	1075	1429	1693
70°	978	1495	1821
75°	829	1577	1903
80°	655	1588	1539
85°	483	1207	1352



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	94.1	3.0
10°-20°	270.7	8.6
20°-30°	414.0	13.1
30°-40°	506.1	16.0
40°-50°	539.4	17.1
50°-60°	515.7	16.4
60°-70°	436.9	13.9
70°-80°	293.6	9.3
80°-90°	82.8	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°	778.8	24.7
0°-40°	1284.9	40.7
0°-60°	2340.0	74.2
0°-90°	3153.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3153.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	992	992	992	992	992	
5°	992	990	985	990	990	94
15°	957	957	956	964	962	270
25°	888	892	898	906	907	409
35°	788	794	807	823	826	494
45°	662	673	696	726	738	510
55°	512	530	577	622	644	456
65°	338	372	449	508	532	335
75°	160	217	303	355	366	171
85°	31	64	78	84	88	39
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	991.6	991.6	991.6	991.6	991.6
2.5°	993.2	993.2	988.5	991.6	991.6
5°	991.6	990.1	985.4	990.1	990.1
7.5°	986.9	985.4	982.2	986.9	985.4
10°	977.5	977.5	974.4	979.1	979.1
12.5°	969.7	968.2	966.6	972.9	971.3
15°	957.2	957.2	955.6	963.5	961.9
17.5°	941.6	943.1	944.7	951.0	952.5
20°	924.4	927.5	929.1	938.4	938.4
22.5°	908.7	910.3	913.4	922.8	922.8
25°	888.4	891.5	897.8	905.6	907.2
27.5°	868.1	869.6	877.4	888.4	890.0
30°	841.5	846.2	855.5	868.1	869.6
32.5°	818.0	822.7	833.7	846.2	849.3
35°	788.3	794.5	807.1	822.7	825.8
37.5°	761.7	766.4	782.0	799.2	803.9
40°	728.9	738.2	753.9	774.2	782.0
42.5°	696.0	705.4	724.2	750.8	760.1
45°	661.6	672.6	696.0	725.7	738.2
47.5°	627.2	639.7	666.3	700.7	714.8
50°	588.1	603.7	636.6	675.7	691.3
52.5°	550.6	569.3	605.3	649.1	669.4
55°	511.5	530.2	577.1	622.5	644.4
57.5°	467.7	492.7	544.3	595.9	619.4
60°	427.0	450.5	513.0	569.3	592.8
62.5°	383.2	414.5	481.7	541.2	564.6
65°	337.8	372.2	448.9	508.3	531.8
67.5°	297.2	334.7	416.0	475.5	498.9
70°	248.7	295.6	380.1	439.5	463.0
72.5°	203.3	254.9	342.5	400.4	422.3
75°	159.5	217.4	303.4	355.0	366.0
77.5°	118.9	179.9	262.8	284.7	276.8
80°	84.5	143.9	204.9	193.9	198.6
82.5°	54.7	109.5	126.7	143.9	148.6
85°	31.3	64.1	78.2	84.5	87.6
87.5°	14.1	23.5	31.3	31.3	29.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)