

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: P391371

Luminaire Tested: **24CZ2-45VHE-HRP-UNV-L940-CD1-SDWPD1-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: P391371
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-L940-CD1-SDWPD1-U
Description: 2x4 CRUZE LED TROFFER WITH 4000K, 90 LEDS, AND HRP LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3225.3 lumens
Efficiency: N/A
Efficacy: 109.0 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

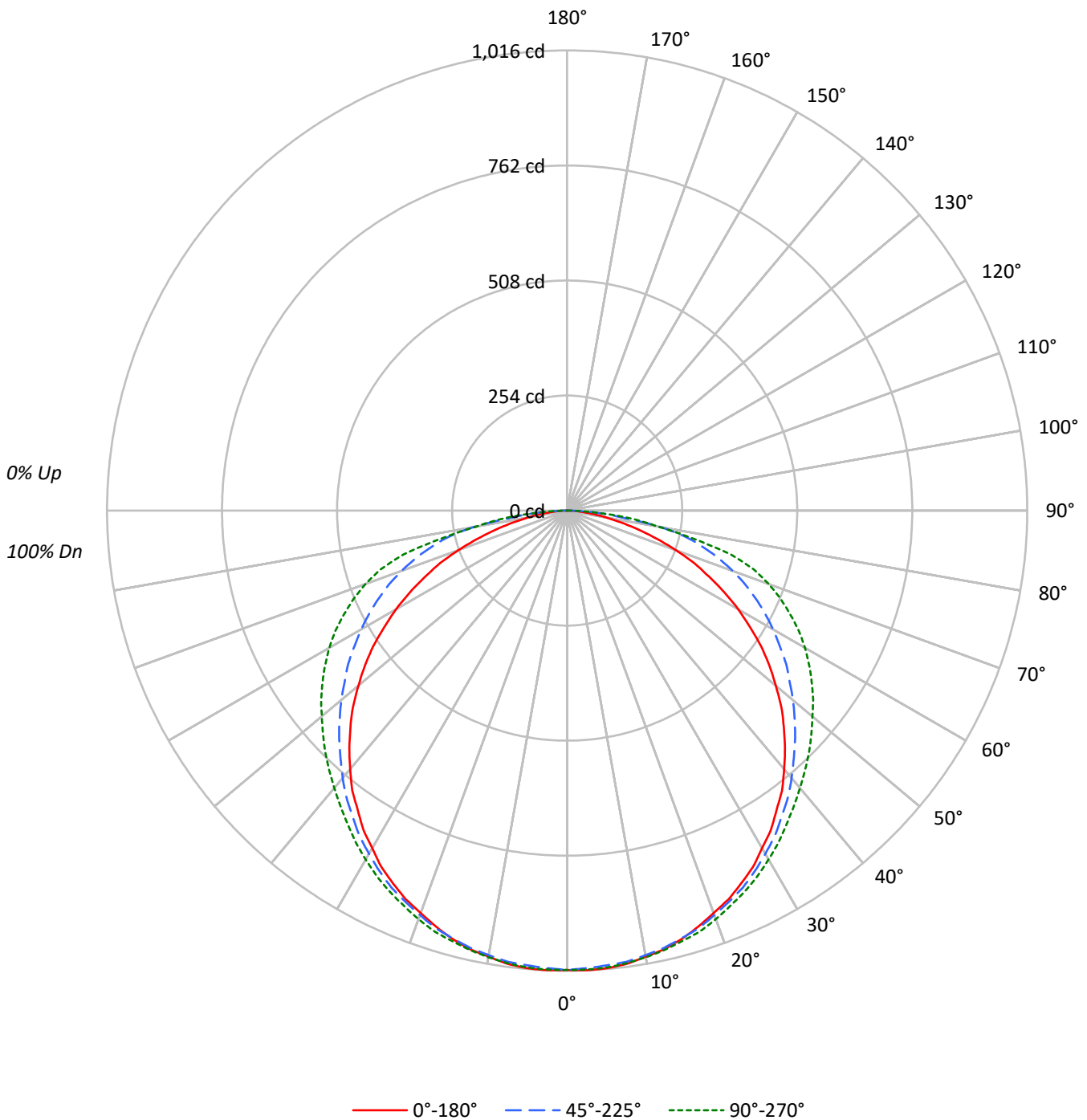
Input Watts (W): 29.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1365	1365	1365
5°	1370	1361	1368
10°	1366	1362	1368
15°	1364	1362	1371
20°	1354	1361	1374
25°	1349	1363	1378
30°	1337	1360	1382
35°	1324	1356	1387
40°	1309	1354	1405
45°	1288	1355	1437
50°	1259	1363	1480
55°	1227	1385	1546
60°	1175	1412	1632
65°	1100	1462	1732
70°	1001	1529	1863
75°	848	1614	1946
80°	669	1624	1574
85°	494	1235	1383



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	96.2	3.0
10°-20°	276.9	8.6
20°-30°	423.4	13.1
30°-40°	517.7	16.0
40°-50°	551.7	17.1
50°-60°	527.5	16.4
60°-70°	446.8	13.9
70°-80°	300.3	9.3
80°-90°	84.7	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°	796.6	24.7
0°-40°	1314.2	40.7
0°-60°	2393.4	74.2
0°-90°	3225.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3225.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1014	1014	1014	1014	1014	
5°	1014	1013	1008	1013	1013	96
15°	979	979	978	986	984	276
25°	909	912	918	926	928	419
35°	806	813	826	842	845	505
45°	677	688	712	742	755	522
55°	523	542	590	637	659	466
65°	346	381	459	520	544	343
75°	163	222	310	363	374	175
85°	32	66	80	86	90	40
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1014.3	1014.3	1014.3	1014.3	1014.3
2.5°	1015.9	1015.9	1011.1	1014.3	1014.3
5°	1014.3	1012.7	1007.9	1012.7	1012.7
7.5°	1009.5	1007.9	1004.7	1009.5	1007.9
10°	999.9	999.9	996.7	1001.5	1001.5
12.5°	991.9	990.3	988.7	995.1	993.5
15°	979.1	979.1	977.5	985.5	983.9
17.5°	963.1	964.7	966.3	972.7	974.3
20°	945.5	948.7	950.3	959.9	959.9
22.5°	929.5	931.1	934.3	943.9	943.9
25°	908.7	911.9	918.3	926.3	927.9
27.5°	887.9	889.5	897.5	908.7	910.3
30°	860.7	865.5	875.1	887.9	889.5
32.5°	836.7	841.5	852.7	865.5	868.7
35°	806.3	812.7	825.5	841.5	844.7
37.5°	779.1	783.9	799.9	817.5	822.3
40°	745.5	755.1	771.1	791.9	799.9
42.5°	711.9	721.5	740.7	767.9	777.5
45°	676.7	687.9	711.9	742.3	755.1
47.5°	641.5	654.3	681.5	716.7	731.1
50°	601.5	617.5	651.1	691.1	707.1
52.5°	563.1	582.3	619.1	663.9	684.7
55°	523.1	542.3	590.3	636.7	659.1
57.5°	478.3	503.9	556.7	609.5	633.5
60°	436.7	460.7	524.7	582.3	606.3
62.5°	391.9	423.9	492.7	553.5	577.5
65°	345.6	380.7	459.1	519.9	543.9
67.5°	304.0	342.4	425.5	486.3	510.3
70°	254.4	302.4	388.7	449.5	473.5
72.5°	208.0	260.8	350.4	409.5	431.9
75°	163.2	222.4	310.4	363.2	374.4
77.5°	121.6	184.0	268.8	291.2	283.2
80°	86.4	147.2	209.6	198.4	203.2
82.5°	56.0	112.0	129.6	147.2	152.0
85°	32.0	65.6	80.0	86.4	89.6
87.5°	14.4	24.0	32.0	32.0	30.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)