

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: P391373

Luminaire Tested: **24CZ2-45VHE-HRP-UNV-L940-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: P391373
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-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: 3305.7 lumens
Efficiency: N/A
Efficacy: 111.7 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

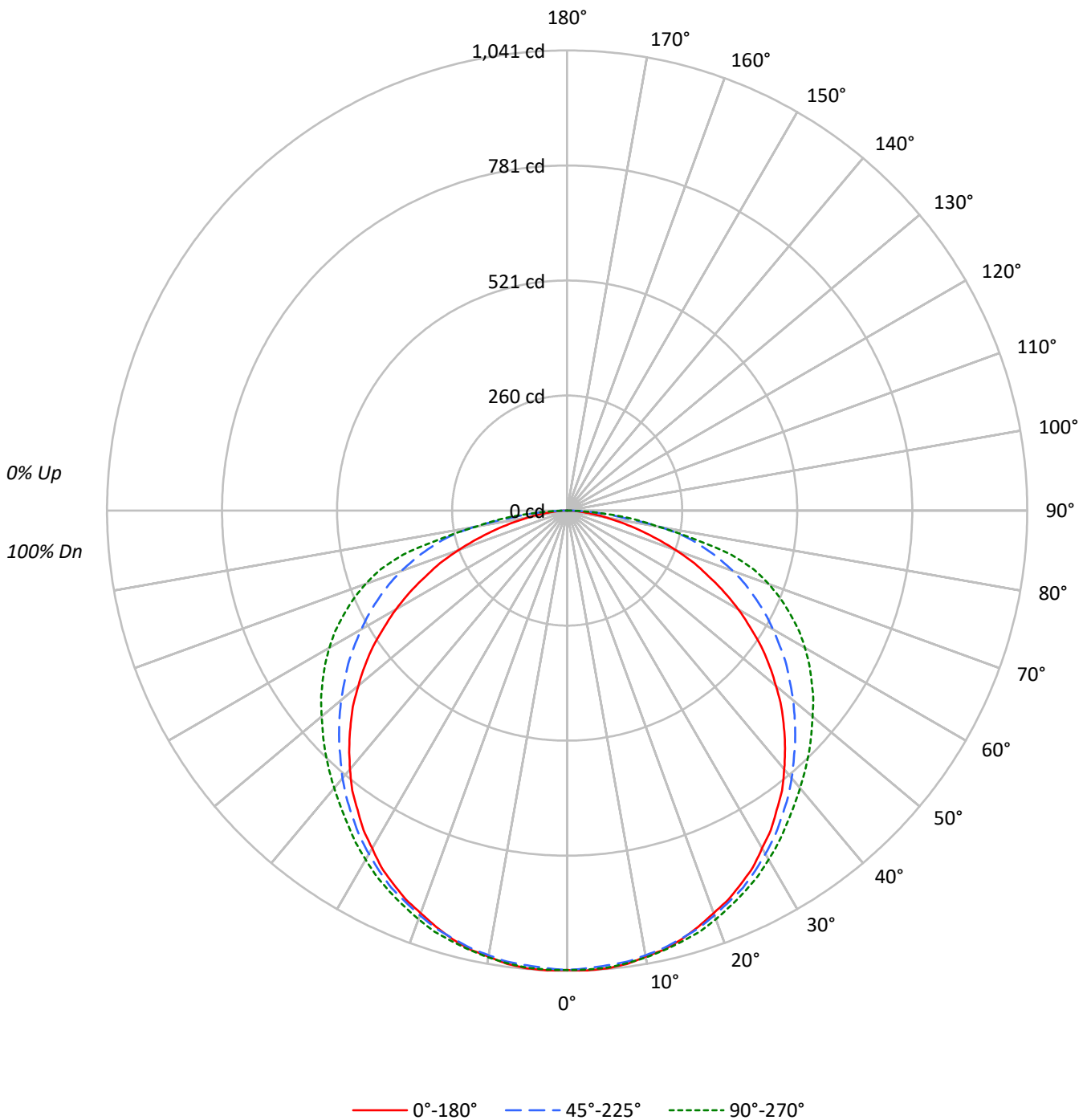
Input Watts (W): 29.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1399	1399	1399
5°	1404	1395	1402
10°	1400	1396	1402
15°	1398	1395	1405
20°	1387	1395	1409
25°	1383	1397	1412
30°	1370	1393	1416
35°	1357	1390	1422
40°	1342	1388	1440
45°	1320	1388	1473
50°	1290	1397	1517
55°	1258	1419	1585
60°	1204	1447	1672
65°	1128	1498	1775
70°	1026	1567	1909
75°	869	1654	1995
80°	686	1664	1613
85°	506	1266	1417



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	98.6	3.0
10°-20°	283.8	8.6
20°-30°	434.0	13.1
30°-40°	530.5	16.0
40°-50°	565.5	17.1
50°-60°	540.6	16.4
60°-70°	458.0	13.9
70°-80°	307.8	9.3
80°-90°	86.8	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°	816.4	24.7
0°-40°	1347.0	40.7
0°-60°	2453.1	74.2
0°-90°	3305.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3305.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1040	1040	1040	1040	1040	
5°	1040	1038	1033	1038	1038	99
15°	1004	1004	1002	1010	1008	283
25°	931	935	941	949	951	429
35°	826	833	846	862	866	518
45°	694	705	730	761	774	535
55°	536	556	605	653	676	478
65°	354	390	471	533	558	352
75°	167	228	318	372	384	179
85°	33	67	82	88	92	41
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1039.5	1039.5	1039.5	1039.5	1039.5
2.5°	1041.2	1041.2	1036.3	1039.5	1039.5
5°	1039.5	1037.9	1033.0	1037.9	1037.9
7.5°	1034.6	1033.0	1029.7	1034.6	1033.0
10°	1024.8	1024.8	1021.5	1026.4	1026.4
12.5°	1016.6	1015.0	1013.3	1019.9	1018.2
15°	1003.5	1003.5	1001.8	1010.0	1008.4
17.5°	987.1	988.7	990.4	996.9	998.6
20°	969.0	972.3	974.0	983.8	983.8
22.5°	952.6	954.3	957.6	967.4	967.4
25°	931.3	934.6	941.2	949.4	951.0
27.5°	910.0	911.7	919.9	931.3	933.0
30°	882.1	887.1	896.9	910.0	911.7
32.5°	857.5	862.5	873.9	887.1	890.3
35°	826.4	833.0	846.1	862.5	865.7
37.5°	798.5	803.4	819.8	837.9	842.8
40°	764.1	773.9	790.3	811.6	819.8
42.5°	729.7	739.5	759.2	787.0	796.9
45°	693.6	705.1	729.7	760.8	773.9
47.5°	657.5	670.6	698.5	734.6	749.3
50°	616.5	632.9	667.3	708.3	724.7
52.5°	577.2	596.8	634.6	680.5	701.8
55°	536.2	555.8	605.0	652.6	675.5
57.5°	490.3	516.5	570.6	624.7	649.3
60°	447.6	472.2	537.8	596.8	621.4
62.5°	401.7	434.5	505.0	567.3	591.9
65°	354.2	390.2	470.6	532.9	557.5
67.5°	311.5	350.9	436.2	498.5	523.1
70°	260.7	309.9	398.4	460.7	485.3
72.5°	213.2	267.3	359.1	419.8	442.7
75°	167.2	227.9	318.1	372.2	383.7
77.5°	124.6	188.6	275.5	298.4	290.2
80°	88.5	150.8	214.8	203.3	208.2
82.5°	57.4	114.8	132.8	150.8	155.8
85°	32.8	67.2	82.0	88.5	91.8
87.5°	14.8	24.6	32.8	32.8	31.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)