

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: P295036

Luminaire Tested: **24CZ2-45HE-HRP-UNV-L935-CD1-U**

Issue Date: 12/2/2019

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: P295036
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-20)
Test Lab: INNOVATIONS CENTER(G3)
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-45HE-HRP-UNV-L935-CD1-U
Description: 2'x4' TROFFER LED MODULE, HIGH EFFICIENCY ROUND PERF. LENS
Light Source: (168) 3500K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER
Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3009.2 lumens
Efficiency: N/A
Efficacy: 85.2 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.3 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

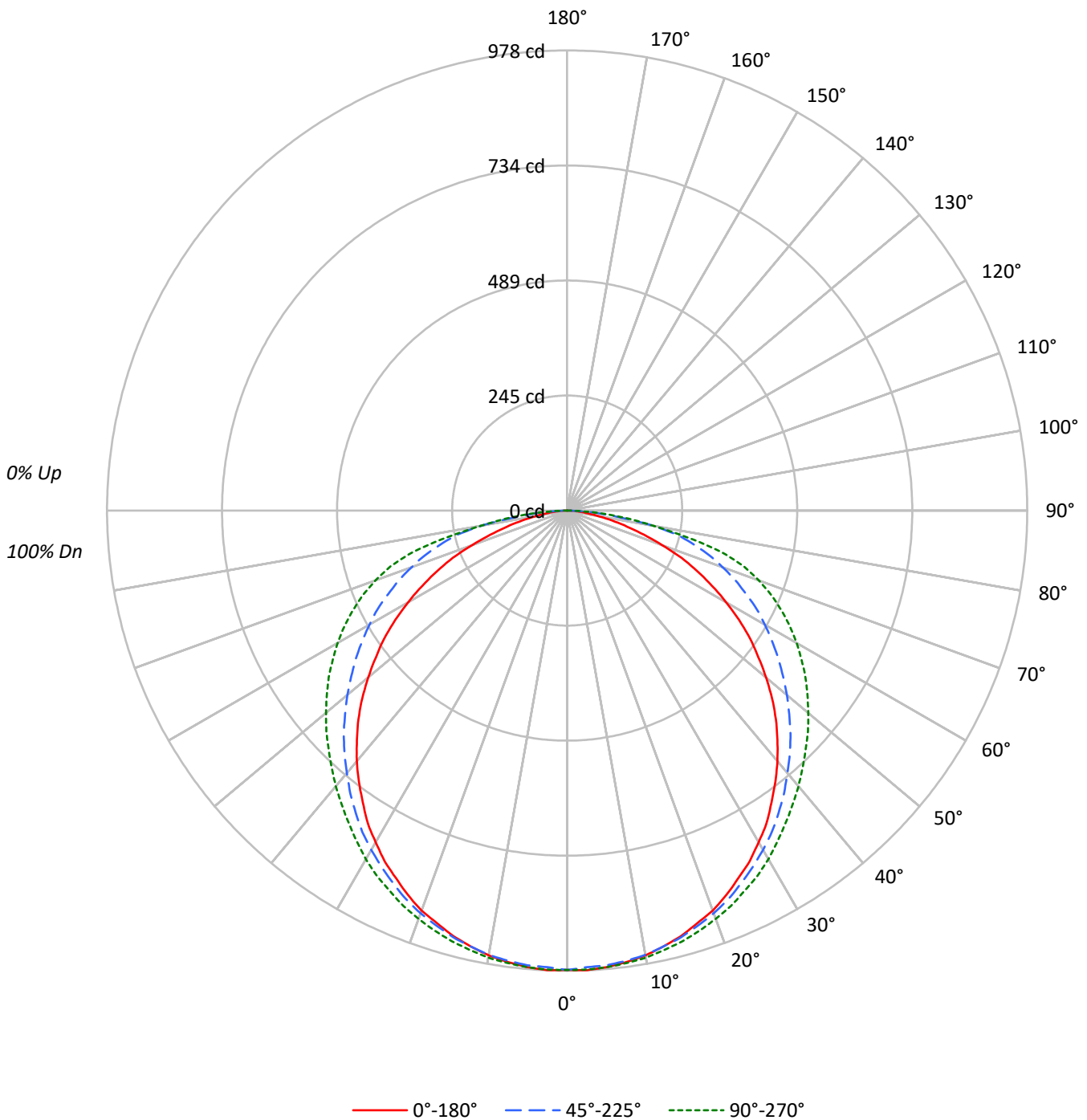
Input Watts (W): 35.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	101	96	93	96	93	90		92	90	87		89	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73		80	75	71		77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61		70	64	59		68	63	58	56
4	81	68	59	52	79	67	59	52	65	57	51		62	56	50		60	54	50	48
5	74	61	52	45	72	60	51	45	58	50	44		56	49	44		54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38		50	43	38		49	42	38	36
7	63	50	41	34	62	49	40	34	47	39	34		46	39	34		44	38	33	31
8	59	45	36	30	57	44	36	30	43	36	30		42	35	30		41	34	30	28
9	55	41	33	27	54	41	33	27	40	32	27		39	32	27		38	31	27	25
10	52	38	30	25	50	38	30	25	37	30	25		36	29	24		35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1314	1314	1314
5°	1315	1310	1315
10°	1312	1310	1318
15°	1304	1307	1320
20°	1295	1304	1322
25°	1279	1298	1324
30°	1264	1294	1329
35°	1244	1287	1330
40°	1221	1279	1343
45°	1194	1278	1364
50°	1155	1276	1400
55°	1114	1285	1451
60°	1051	1305	1515
65°	971	1336	1600
70°	847	1383	1705
75°	688	1454	1762
80°	508	1425	1425
85°	389	1050	1186



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	92.5	3.1
10°-20°	265.6	8.8
20°-30°	404.3	13.4
30°-40°	490.9	16.3
40°-50°	518.7	17.2
50°-60°	489.4	16.3
60°-70°	406.9	13.5
70°-80°	267.7	8.9
80°-90°	73.0	2.4
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°	762.4	25.3
0°-40°	1253.4	41.7
0°-60°	2261.5	75.2
0°-90°	3009.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3009.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	976	976	976	976	976	
5°	974	974	970	974	974	92
15°	936	937	938	947	947	264
25°	862	867	874	889	892	397
35°	757	766	784	804	810	474
45°	627	640	672	704	717	483
55°	475	495	548	600	619	423
65°	305	340	420	481	503	301
75°	132	193	280	331	339	143
85°	25	55	68	76	77	31
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	976.3	976.3	976.3	976.3	976.3
2.5°	977.6	976.3	971.3	976.3	976.3
5°	973.8	973.8	970.0	973.8	973.8
7.5°	967.5	967.5	965.0	970.0	970.0
10°	960.0	960.0	958.7	965.0	965.0
12.5°	948.6	949.9	948.6	956.2	956.2
15°	936.0	937.3	938.5	947.4	947.4
17.5°	919.6	922.2	924.7	934.8	936.0
20°	904.5	905.8	910.8	922.2	923.4
22.5°	884.4	888.1	894.4	905.8	909.6
25°	861.7	866.7	874.3	889.4	891.9
27.5°	840.3	844.1	854.1	870.5	875.5
30°	813.8	820.1	832.7	849.1	855.4
32.5°	788.6	794.9	810.0	827.7	832.7
35°	757.1	765.9	783.6	803.7	810.0
37.5°	726.9	735.7	757.1	779.8	787.4
40°	695.4	705.5	728.2	754.6	764.7
42.5°	661.4	675.2	700.4	729.4	740.8
45°	627.4	640.0	671.5	704.2	716.8
47.5°	590.8	606.0	640.0	679.0	694.1
50°	551.8	570.7	609.7	652.6	668.9
52.5°	512.7	534.1	578.2	626.1	643.7
55°	474.9	495.1	548.0	599.7	618.6
57.5°	433.4	458.6	516.5	571.9	590.8
60°	390.5	418.2	485.0	543.0	563.1
62.5°	347.7	379.2	454.8	512.7	534.1
65°	304.9	340.1	419.5	481.2	502.7
67.5°	263.3	302.3	386.8	448.5	469.9
70°	215.4	264.6	351.5	411.9	433.4
72.5°	171.3	228.0	317.5	374.2	393.1
75°	132.3	192.7	279.7	331.3	338.9
77.5°	97.0	157.5	240.6	258.3	259.5
80°	65.5	126.0	183.9	181.4	183.9
82.5°	42.8	94.5	115.9	129.8	131.0
85°	25.2	55.4	68.0	75.6	76.8
87.5°	12.6	18.9	23.9	25.2	27.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)