

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: FAIL-SAFE

Report Number: P310102

Luminaire Tested: **24FCZ2-45HE-UNV-L82765-RDP-CA125-W2A-U-6500K**

Issue Date: 3/3/2020

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: P310102
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-19)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24FCZ2-45HE-UNV-L82765-RDP-CA125-W2A-U-6500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.125" ACRYLIC SHEET
Light Source: (336) 6500K TUNABLE CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER
Luminaire Equipment:

<u>Sample No.</u>	<u>Condition</u>	<u>Description</u>
AS-5443-1	Good	WHITE TWIN R-EVOLVE FLOOD
AS-5443-2	Good	REFLECTOR
AS-5443-3	Good	DRIVER
AS-5443-4	Good	UPPER MODULE
AS-5443-5	Good	LENS
AS-5443-6	Good	DRIVER 2
AS-5443-7	Good	TRIM RING

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2872.0 lumens
Efficiency: N/A
Efficacy: 81.4 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

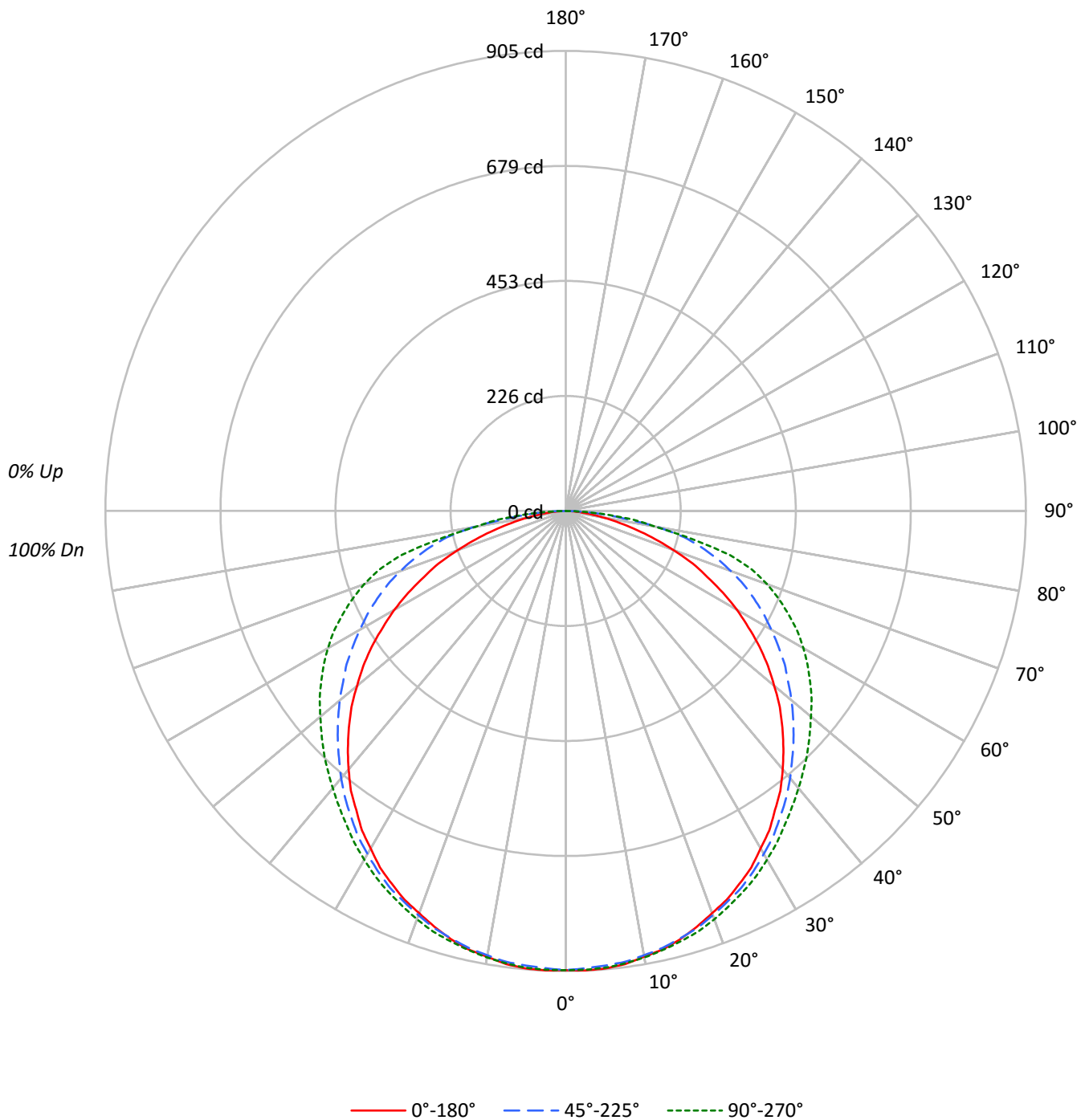
Input Watts (W): 35.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				0
RW	70	50	30	10	70	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		100
1	108	103	98	94	105	100	96	92	96	93	89		92	89	87		82
2	97	89	81	75	95	87	80	74	83	77	72		80	75	71		67
3	88	77	68	62	86	76	67	61	72	66	60		70	64	59		56
4	81	68	59	52	78	67	58	51	64	57	51		62	55	50		47
5	74	60	51	44	72	59	51	44	57	49	43		55	48	43		40
6	68	54	45	38	66	53	45	38	51	44	38		50	43	37		35
7	63	49	40	34	61	48	40	34	47	39	33		45	38	33		31
8	59	45	36	30	57	44	36	30	43	35	30		41	34	29		27
9	55	41	33	27	53	40	32	27	39	32	27		38	31	26		24
10	51	38	30	24	50	37	29	24	36	29	24		35	29	24		22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1215	1215	1215
5°	1220	1212	1218
10°	1216	1213	1218
15°	1214	1212	1220
20°	1205	1212	1224
25°	1201	1214	1227
30°	1191	1211	1230
35°	1179	1207	1236
40°	1166	1206	1251
45°	1147	1206	1279
50°	1121	1214	1318
55°	1093	1233	1377
60°	1047	1257	1453
65°	980	1301	1542
70°	891	1362	1659
75°	755	1437	1733
80°	596	1446	1402
85°	440	1099	1232



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	85.7	3.0
10°-20°	246.6	8.6
20°-30°	377.1	13.1
30°-40°	460.9	16.0
40°-50°	491.3	17.1
50°-60°	469.7	16.4
60°-70°	397.9	13.9
70°-80°	267.4	9.3
80°-90°	75.4	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°	709.3	24.7
0°-40°	1170.2	40.7
0°-60°	2131.2	74.2
0°-90°	2872.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2872.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	903	903	903	903	903	
5°	903	902	898	902	902	86
15°	872	872	870	878	876	246
25°	809	812	818	825	826	373
35°	718	724	735	749	752	450
45°	603	613	634	661	672	465
55°	466	483	526	567	587	415
65°	308	339	409	463	484	305
75°	145	198	276	323	333	156
85°	28	58	71	77	80	35
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	903.2	903.2	903.2	903.2	903.2
2.5°	904.6	904.6	900.3	903.2	903.2
5°	903.2	901.7	897.5	901.7	901.7
7.5°	898.9	897.5	894.6	898.9	897.5
10°	890.3	890.3	887.5	891.8	891.8
12.5°	883.2	881.8	880.4	886.1	884.6
15°	871.8	871.8	870.4	877.5	876.1
17.5°	857.6	859.0	860.4	866.1	867.5
20°	841.9	844.8	846.2	854.7	854.7
22.5°	827.7	829.1	831.9	840.5	840.5
25°	809.1	812.0	817.7	824.8	826.2
27.5°	790.6	792.0	799.2	809.1	810.6
30°	766.4	770.7	779.2	790.6	792.0
32.5°	745.0	749.3	759.3	770.7	773.5
35°	718.0	723.7	735.1	749.3	752.2
37.5°	693.8	698.0	712.3	727.9	732.2
40°	663.8	672.4	686.6	705.2	712.3
42.5°	633.9	642.5	659.6	683.8	692.3
45°	602.6	612.6	633.9	661.0	672.4
47.5°	571.2	582.6	606.9	638.2	651.0
50°	535.6	549.9	579.8	615.4	629.6
52.5°	501.4	518.5	551.3	591.2	609.7
55°	465.8	482.9	525.7	567.0	586.9
57.5°	425.9	448.7	495.7	542.8	564.1
60°	388.9	410.3	467.3	518.5	539.9
62.5°	349.0	377.5	438.8	492.9	514.3
65°	307.7	339.0	408.8	463.0	484.3
67.5°	270.7	304.9	378.9	433.1	454.4
70°	226.5	269.2	346.2	400.3	421.7
72.5°	185.2	232.2	312.0	364.7	384.6
75°	145.3	198.0	276.4	323.4	333.3
77.5°	108.3	163.8	239.3	259.3	252.1
80°	76.9	131.1	186.6	176.6	180.9
82.5°	49.9	99.7	115.4	131.1	135.3
85°	28.5	58.4	71.2	76.9	79.8
87.5°	12.8	21.4	28.5	28.5	27.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)