

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: P310002

Luminaire Tested: **24FCZ2-40HE-UNV-L82765-RDP-CA08-W2A-U-5700K**

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: P310002
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: 24FCZ2-40HE-UNV-L82765-RDP-CA08-W2A-U-5700K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.08" ACRYLIC SHEET
Light Source: (336) 5700K 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: 2611.0 lumens
Efficiency: N/A
Efficacy: 83.4 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

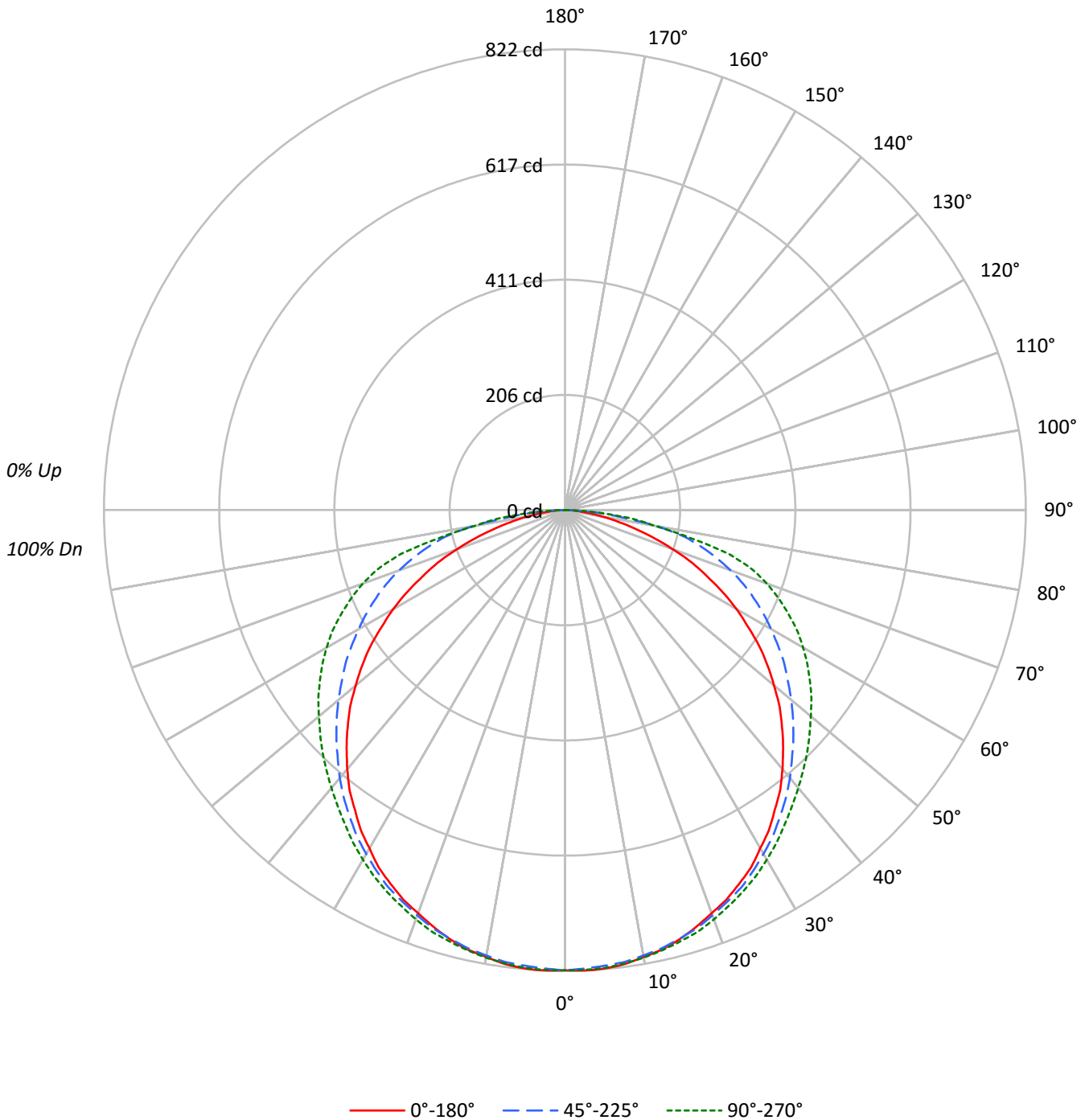
Input Watts (W): 31.3
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	68	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°	1105	1105	1105
5°	1109	1102	1107
10°	1106	1102	1108
15°	1104	1102	1109
20°	1096	1102	1113
25°	1092	1104	1115
30°	1083	1101	1119
35°	1072	1098	1123
40°	1060	1096	1137
45°	1042	1097	1163
50°	1019	1103	1198
55°	993	1121	1252
60°	952	1143	1321
65°	890	1183	1402
70°	810	1238	1508
75°	687	1306	1576
80°	542	1315	1275
85°	400	1000	1119



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	77.9	3.0
10°-20°	224.2	8.6
20°-30°	342.8	13.1
30°-40°	419.0	16.0
40°-50°	446.6	17.1
50°-60°	427.0	16.4
60°-70°	361.7	13.9
70°-80°	243.1	9.3
80°-90°	68.6	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°	644.8	24.7
0°-40°	1063.9	40.7
0°-60°	1937.5	74.2
0°-90°	2611.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2611.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	821	821	821	821	821	
5°	821	820	816	820	820	78
15°	793	793	791	798	796	223
25°	736	738	743	750	751	339
35°	653	658	668	681	684	409
45°	548	557	576	601	611	423
55°	424	439	478	515	534	377
65°	280	308	372	421	440	278
75°	132	180	251	294	303	141
85°	26	53	65	70	72	32
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	821.1	821.1	821.1	821.1	821.1
2.5°	822.4	822.4	818.5	821.1	821.1
5°	821.1	819.8	815.9	819.8	819.8
7.5°	817.2	815.9	813.3	817.2	815.9
10°	809.4	809.4	806.8	810.7	810.7
12.5°	803.0	801.7	800.4	805.5	804.2
15°	792.6	792.6	791.3	797.8	796.5
17.5°	779.6	780.9	782.2	787.4	788.7
20°	765.4	768.0	769.3	777.1	777.1
22.5°	752.4	753.7	756.3	764.1	764.1
25°	735.6	738.2	743.4	749.9	751.2
27.5°	718.8	720.1	726.5	735.6	736.9
30°	696.8	700.6	708.4	718.8	720.1
32.5°	677.3	681.2	690.3	700.6	703.2
35°	652.7	657.9	668.3	681.2	683.8
37.5°	630.7	634.6	647.5	661.8	665.7
40°	603.5	611.3	624.2	641.1	647.5
42.5°	576.3	584.1	599.6	621.6	629.4
45°	547.8	556.9	576.3	600.9	611.3
47.5°	519.3	529.7	551.7	580.2	591.9
50°	487.0	499.9	527.1	559.5	572.4
52.5°	455.9	471.4	501.2	537.5	554.3
55°	423.5	439.0	477.9	515.4	533.6
57.5°	387.2	408.0	450.7	493.4	512.9
60°	353.6	373.0	424.8	471.4	490.8
62.5°	317.3	343.2	398.9	448.1	467.5
65°	279.7	308.2	371.7	420.9	440.3
67.5°	246.1	277.1	344.5	393.7	413.1
70°	205.9	244.8	314.7	363.9	383.3
72.5°	168.4	211.1	283.6	331.5	349.7
75°	132.1	180.0	251.2	294.0	303.1
77.5°	98.4	148.9	217.6	235.7	229.2
80°	69.9	119.1	169.7	160.6	164.5
82.5°	45.3	90.7	104.9	119.1	123.0
85°	25.9	53.1	64.8	69.9	72.5
87.5°	11.7	19.4	25.9	25.9	24.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)