

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: P309230

Luminaire Tested: **24FCZ2-35HE-UNV-L82765-HRP-CA08-W2A-U-2700K**

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: P309230
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-20)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24FCZ2-35HE-UNV-L82765-HRP-CA08-W2A-U-2700K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.08" ACRYLIC SHEET
Light Source: (336) 2700K 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: 2240.0 lumens
Efficiency: N/A
Efficacy: 86.2 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

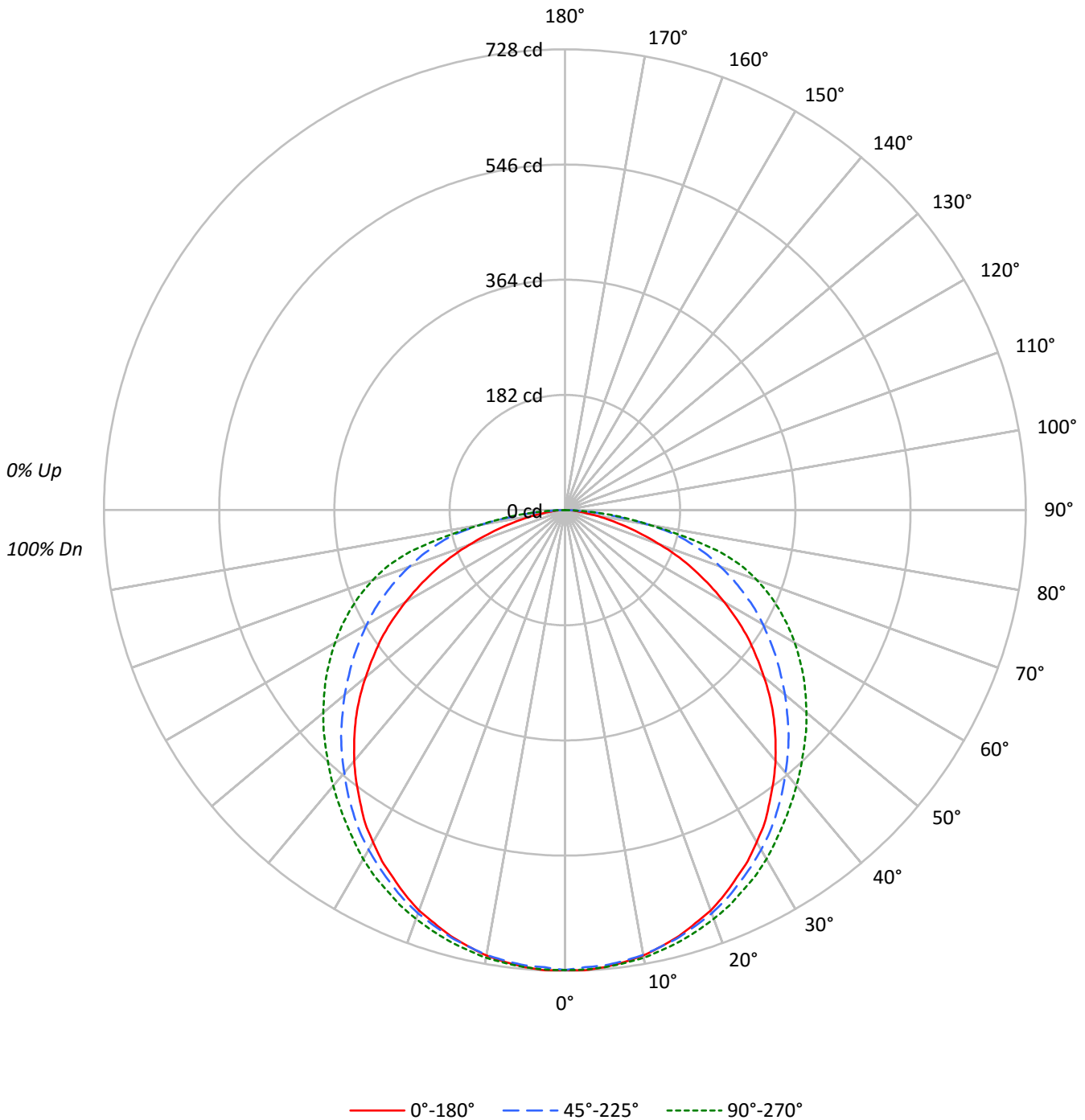
Input Watts (W): 26
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	978	978	978
5°	979	975	979
10°	976	975	981
15°	971	973	982
20°	964	971	984
25°	952	966	986
30°	941	963	989
35°	926	958	990
40°	909	952	1000
45°	889	951	1015
50°	860	950	1042
55°	829	957	1080
60°	782	971	1128
65°	722	994	1191
70°	631	1029	1269
75°	512	1082	1312
80°	378	1061	1061
85°	290	781	883



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	68.8	3.1
10°-20°	197.7	8.8
20°-30°	301.0	13.4
30°-40°	365.5	16.3
40°-50°	386.1	17.2
50°-60°	364.3	16.3
60°-70°	302.9	13.5
70°-80°	199.3	8.9
80°-90°	54.3	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°	567.5	25.3
0°-40°	933.0	41.7
0°-60°	1683.4	75.2
0°-90°	2240.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2240.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	727	727	727	727	727	
5°	725	725	722	725	725	69
15°	697	698	699	705	705	197
25°	641	645	651	662	664	296
35°	564	570	583	598	603	353
45°	467	476	500	524	534	360
55°	354	368	408	446	460	315
65°	227	253	312	358	374	224
75°	98	144	208	247	252	106
85°	19	41	51	56	57	23
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	726.8	726.8	726.8	726.8	726.8
2.5°	727.7	726.8	723.0	726.8	726.8
5°	724.9	724.9	722.1	724.9	724.9
7.5°	720.2	720.2	718.3	722.1	722.1
10°	714.6	714.6	713.6	718.3	718.3
12.5°	706.1	707.1	706.1	711.8	711.8
15°	696.8	697.7	698.6	705.2	705.2
17.5°	684.6	686.4	688.3	695.8	696.8
20°	673.3	674.3	678.0	686.4	687.4
22.5°	658.3	661.1	665.8	674.3	677.1
25°	641.4	645.2	650.8	662.1	663.9
27.5°	625.5	628.3	635.8	648.0	651.7
30°	605.8	610.5	619.9	632.1	636.7
32.5°	587.0	591.7	603.0	616.1	619.9
35°	563.6	570.2	583.3	598.3	603.0
37.5°	541.1	547.7	563.6	580.5	586.1
40°	517.6	525.1	542.0	561.7	569.2
42.5°	492.3	502.6	521.4	543.0	551.4
45°	467.0	476.4	499.8	524.2	533.6
47.5°	439.8	451.1	476.4	505.5	516.7
50°	410.7	424.8	453.9	485.8	498.0
52.5°	381.7	397.6	430.4	466.1	479.2
55°	353.5	368.5	407.9	446.4	460.4
57.5°	322.6	341.3	384.5	425.7	439.8
60°	290.7	311.3	361.0	404.2	419.2
62.5°	258.8	282.3	338.5	381.7	397.6
65°	226.9	253.2	312.3	358.2	374.2
67.5°	196.0	225.1	287.9	333.8	349.8
70°	160.4	196.9	261.6	306.6	322.6
72.5°	127.5	169.7	236.3	278.5	292.6
75°	98.5	143.5	208.2	246.6	252.3
77.5°	72.2	117.2	179.1	192.2	193.2
80°	48.8	93.8	136.9	135.0	136.9
82.5°	31.9	70.3	86.3	96.6	97.5
85°	18.8	41.3	50.6	56.3	57.2
87.5°	9.4	14.1	17.8	18.8	20.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)