

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: P308652

Luminaire Tested: **22FCZ2-24HE-UNV-L82765-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: P308652
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-33)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 22FCZ2-24HE-UNV-L82765-CA08-W2A-U-5700K
Description: 2'X2' TROFFER LED MODULE, RIBBED LENS, 0.08" ACRYLIC SHEET
Light Source: (168) 3000K 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: 2289.0 lumens
Efficiency: N/A
Efficacy: 118.0 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.28 / 1.37
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

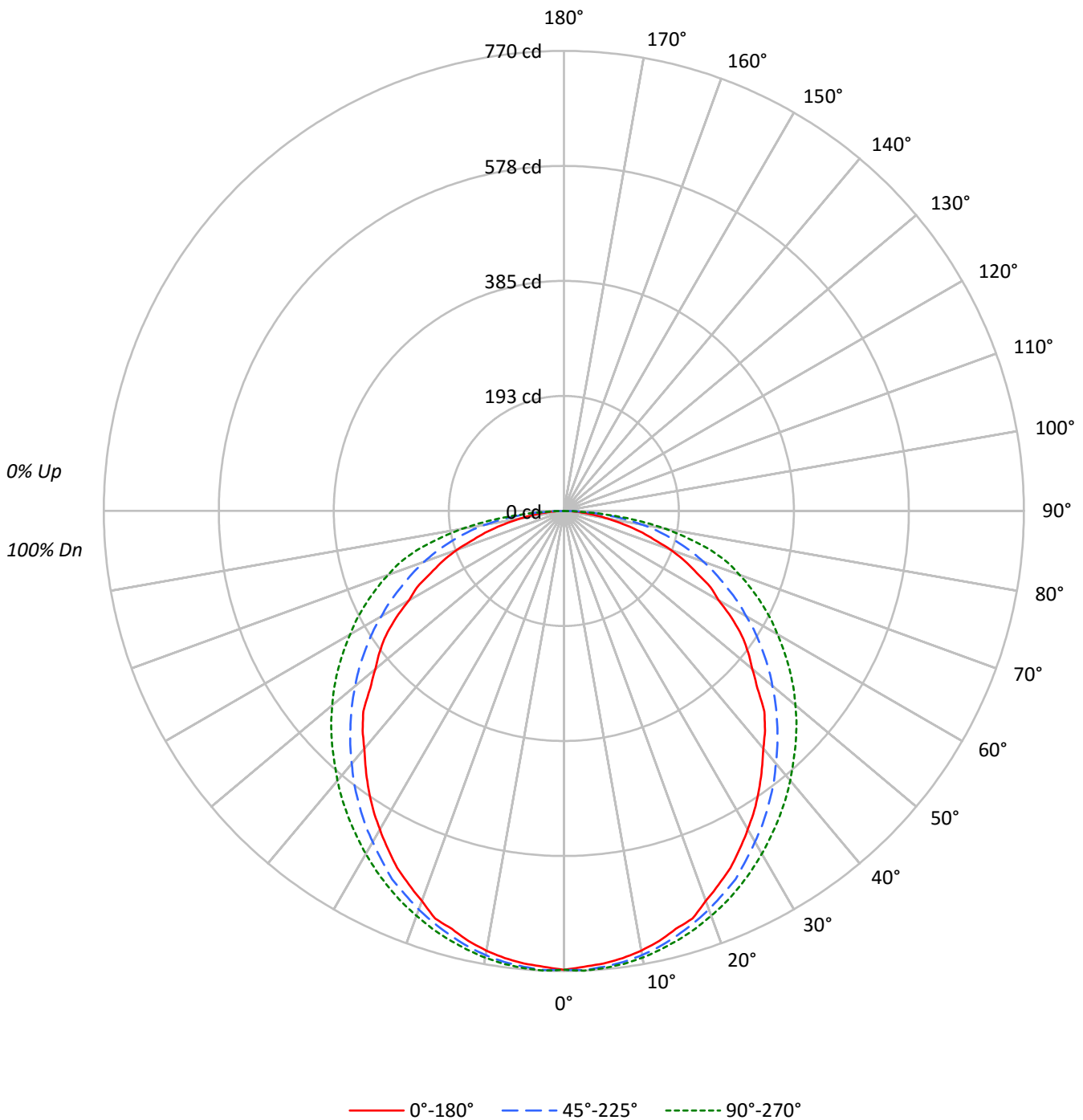
Input Watts (W): 19.4
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	90	92	89	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	60	68	63	59	56
4	81	69	60	53	79	67	59	52	65	57	51	62	56	51	60	55	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	39	51	44	38	49	43	38	36
7	64	50	41	35	62	49	40	34	47	40	34	46	39	34	45	38	34	32
8	59	45	37	31	58	45	36	31	43	36	30	42	35	30	41	35	30	28
9	55	42	33	28	54	41	33	28	40	33	27	39	32	27	38	32	27	25
10	52	38	30	25	51	38	30	25	37	30	25	36	29	25	35	29	25	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2067	2067	2067
5°	2054	2069	2075
10°	2042	2062	2075
15°	2018	2048	2069
20°	1989	2033	2064
25°	1958	2020	2062
30°	1913	1988	2060
35°	1872	1965	2062
40°	1824	1940	2070
45°	1805	1922	2089
50°	1724	1908	2119
55°	1706	1902	2164
60°	1610	1899	2223
65°	1563	1911	2323
70°	1500	1957	2465
75°	1367	2016	2654
80°	1172	2089	2682
85°	948	1995	2300



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	72.7	3.2
10°-20°	207.3	9.1
20°-30°	312.0	13.6
30°-40°	374.5	16.4
40°-50°	391.4	17.1
50°-60°	364.8	15.9
60°-70°	299.2	13.1
70°-80°	201.6	8.8
80°-90°	65.7	2.9
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°	592.0	25.9
0°-40°	966.5	42.2
0°-60°	1722.6	75.3
0°-90°	2289.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2289.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	768	768	768	768	768	
5°	760	762	766	767	768	72
15°	724	728	735	742	743	205
25°	660	664	680	690	695	303
35°	570	577	598	619	628	356
45°	474	478	505	536	549	362
55°	364	370	405	444	461	322
65°	245	256	300	344	365	244
75°	132	146	194	238	255	138
85°	31	44	65	76	74	37
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	768.0	768.0	768.0	768.0	768.0
2.5°	763.6	765.8	769.1	770.2	770.2
5°	760.3	762.5	765.8	766.9	768.0
7.5°	754.8	757.0	761.4	763.6	764.7
10°	747.2	749.4	754.8	758.1	759.2
12.5°	737.3	739.5	746.1	750.5	751.5
15°	724.2	728.5	735.1	741.7	742.8
17.5°	715.4	714.3	723.1	730.7	732.9
20°	694.6	700.1	709.9	718.7	720.9
22.5°	677.0	681.4	694.6	704.4	708.8
25°	659.5	663.9	680.3	690.2	694.6
27.5°	637.6	644.2	659.5	673.8	679.2
30°	615.7	622.3	639.8	656.2	662.8
32.5°	593.8	601.5	620.1	637.6	645.3
35°	569.7	577.4	598.2	619.0	627.7
37.5°	544.5	554.3	576.3	599.3	609.1
40°	519.3	529.1	552.2	578.4	589.4
42.5°	498.5	502.9	529.1	557.6	568.6
45°	474.4	477.7	505.0	535.7	548.9
47.5°	439.3	451.4	480.9	514.9	528.1
50°	411.9	425.1	455.7	491.9	506.1
52.5°	388.9	397.7	431.6	467.8	484.2
55°	363.7	370.3	405.4	443.7	461.2
57.5°	333.0	345.1	380.2	419.6	437.1
60°	299.1	314.4	352.8	395.5	413.0
62.5°	277.2	285.9	327.6	370.3	390.0
65°	245.4	256.4	300.2	344.0	364.8
67.5°	219.1	230.1	275.0	318.8	339.6
70°	190.6	201.6	248.7	292.5	313.3
72.5°	157.8	173.1	222.4	266.2	288.1
75°	131.5	145.7	193.9	237.7	255.3
77.5°	101.9	120.5	165.4	201.6	214.7
80°	75.6	94.2	134.8	161.0	173.1
82.5°	51.5	70.1	100.8	120.5	127.1
85°	30.7	43.8	64.6	75.6	74.5
87.5°	14.2	18.6	26.3	26.3	25.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)