

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: P308698

Luminaire Tested: **22FCZ2-29HE-UNV-L82765-CA08-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: P308698
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: 22FCZ2-29HE-UNV-L82765-CA08-W2A-U-6500K
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: 2683.0 lumens
Efficiency: N/A
Efficacy: 114.7 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

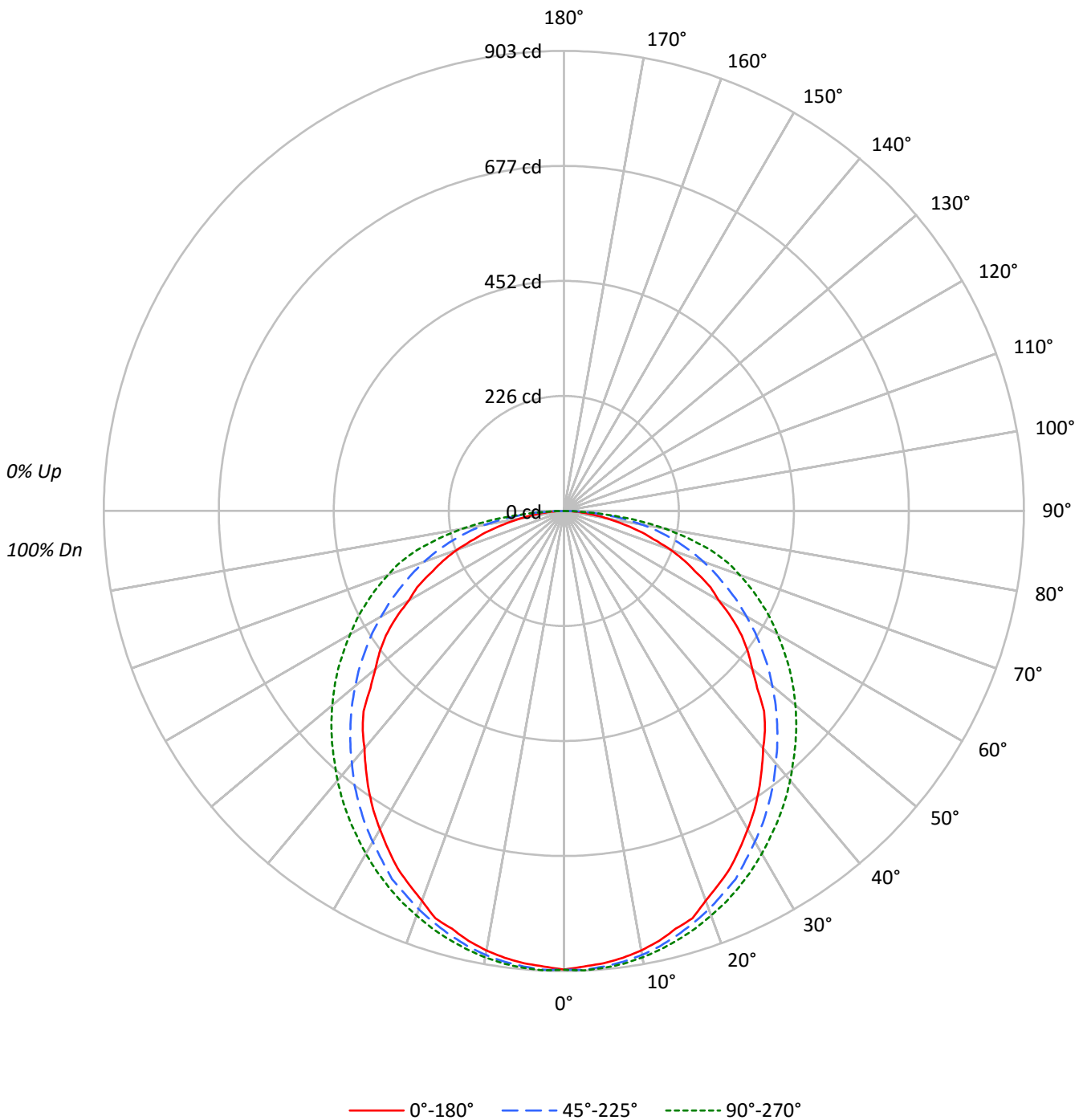
Input Watts (W): 23.4
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2422	2422	2422
5°	2407	2425	2432
10°	2393	2418	2432
15°	2365	2400	2425
20°	2331	2383	2420
25°	2295	2368	2417
30°	2243	2330	2414
35°	2193	2303	2417
40°	2138	2273	2427
45°	2116	2253	2448
50°	2021	2236	2484
55°	2000	2229	2536
60°	1887	2225	2605
65°	1831	2240	2723
70°	1758	2293	2890
75°	1602	2363	3111
80°	1373	2447	3144
85°	1112	2340	2695



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	85.2	3.2
10°-20°	243.0	9.1
20°-30°	365.7	13.6
30°-40°	438.9	16.4
40°-50°	458.8	17.1
50°-60°	427.5	15.9
60°-70°	350.7	13.1
70°-80°	236.3	8.8
80°-90°	77.0	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°	693.9	25.9
0°-40°	1132.8	42.2
0°-60°	2019.1	75.3
0°-90°	2683.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2683.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	900	900	900	900	900	
5°	891	894	898	899	900	85
15°	849	854	862	869	871	240
25°	773	778	797	809	814	355
35°	668	677	701	726	736	417
45°	556	560	592	628	643	425
55°	426	434	475	520	541	378
65°	288	300	352	403	428	286
75°	154	171	227	279	299	162
85°	36	51	76	89	87	43
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	900.2	900.2	900.2	900.2	900.2
2.5°	895.0	897.6	901.5	902.7	902.7
5°	891.2	893.7	897.6	898.9	900.2
7.5°	884.8	887.3	892.5	895.0	896.3
10°	875.8	878.3	884.8	888.6	889.9
12.5°	864.2	866.8	874.5	879.6	880.9
15°	848.8	853.9	861.6	869.4	870.6
17.5°	838.5	837.2	847.5	856.5	859.1
20°	814.1	820.6	832.1	842.4	845.0
22.5°	793.6	798.7	814.1	825.7	830.8
25°	773.0	778.2	797.4	809.0	814.1
27.5°	747.4	755.1	773.0	789.7	796.2
30°	721.7	729.4	749.9	769.2	776.9
32.5°	696.0	705.0	726.8	747.4	756.3
35°	667.7	676.7	701.1	725.5	735.8
37.5°	638.2	649.8	675.4	702.4	714.0
40°	608.7	620.2	647.2	678.0	690.9
42.5°	584.3	589.4	620.2	653.6	666.5
45°	556.0	559.9	592.0	627.9	643.3
47.5°	514.9	529.1	563.7	603.5	618.9
50°	482.8	498.2	534.2	576.6	593.3
52.5°	455.9	466.1	505.9	548.3	567.6
55°	426.3	434.0	475.1	520.1	540.6
57.5°	390.4	404.5	445.6	491.8	512.4
60°	350.6	368.5	413.5	463.6	484.1
62.5°	324.9	335.2	384.0	434.0	457.1
65°	287.6	300.5	351.8	403.2	427.6
67.5°	256.8	269.7	322.3	373.7	398.1
70°	223.4	236.3	291.5	342.9	367.3
72.5°	184.9	202.9	260.7	312.0	337.7
75°	154.1	170.8	227.3	278.7	299.2
77.5°	119.4	141.3	193.9	236.3	251.7
80°	88.6	110.4	157.9	188.8	202.9
82.5°	60.4	82.2	118.1	141.3	149.0
85°	36.0	51.4	75.8	88.6	87.3
87.5°	16.7	21.8	30.8	30.8	29.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)