

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: P308961

Luminaire Tested: **22FCZ2-29HE-UNV-L82765-S-CA08-W2A-U-3000K**

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: P308961
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-23)
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-S-CA08-W2A-U-3000K
Description: 2'X2' TROFFER LED MODULE, SMOOTH 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: 2556.0 lumens
Efficiency: N/A
Efficacy: 115.1 lumens/watt
Spacing Criteria (0/90/45): 1.18 / 1.26 / 1.34
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

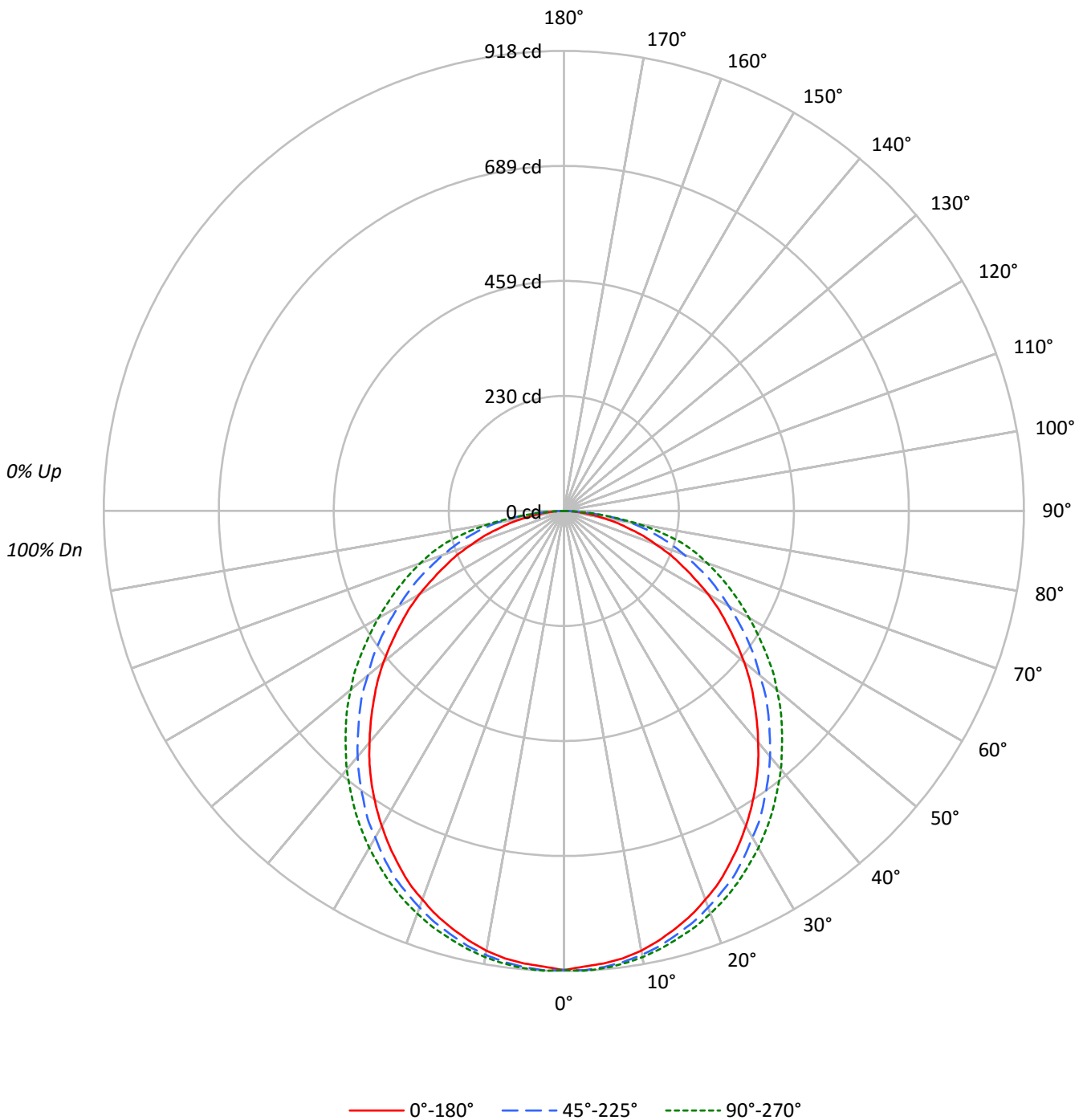
Input Watts (W): 22.2
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	99	95	106	101	97	94	97	94	91	93	90	88	89	87	85	83
2	98	90	83	77	96	88	82	76	84	79	74	81	77	73	78	74	71	69
3	90	79	71	64	87	77	70	63	74	68	62	72	66	61	69	64	60	58
4	82	70	61	54	80	69	60	54	66	59	53	64	57	52	61	56	52	49
5	75	62	53	47	73	61	53	46	59	52	46	57	51	45	55	50	45	43
6	70	56	47	41	68	55	47	41	53	46	40	52	45	40	50	44	39	37
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	33
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	31	30
9	56	43	35	29	55	42	34	29	41	34	29	40	33	29	39	33	28	27
10	53	40	32	26	51	39	31	26	38	31	26	37	31	26	36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2465	2465	2465
5°	2448	2468	2474
10°	2434	2457	2470
15°	2402	2435	2459
20°	2363	2411	2449
25°	2316	2387	2433
30°	2257	2338	2412
35°	2194	2296	2390
40°	2120	2250	2367
45°	2042	2197	2342
50°	1967	2137	2321
55°	1874	2098	2305
60°	1791	2047	2298
65°	1671	2035	2323
70°	1539	2017	2393
75°	1389	2046	2517
80°	1201	2108	2365
85°	994	1766	1766



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	86.6	3.4
10°-20°	246.5	9.6
20°-30°	368.8	14.4
30°-40°	436.8	17.1
40°-50°	445.1	17.4
50°-60°	398.9	15.6
60°-70°	312.3	12.2
70°-80°	201.4	7.9
80°-90°	59.5	2.3
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°	701.9	27.5
0°-40°	1138.7	44.5
0°-60°	1982.7	77.6
0°-90°	2556.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2556.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	916	916	916	916	916	
5°	906	909	914	915	916	86
15°	862	867	874	881	882	243
25°	780	787	804	814	819	359
35°	668	676	699	720	728	417
45°	537	549	577	607	615	414
55°	400	413	447	478	491	358
65°	262	278	320	351	365	261
75°	134	154	197	230	242	143
85°	32	44	57	57	57	38
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	915.9	915.9	915.9	915.9	915.9
2.5°	909.9	912.3	917.1	918.3	918.3
5°	906.4	908.7	913.5	914.7	915.9
7.5°	900.4	901.6	907.5	909.9	911.1
10°	890.9	893.2	899.2	902.8	904.0
12.5°	877.7	881.3	888.5	893.2	894.4
15°	862.2	867.0	874.2	881.3	882.5
17.5°	845.5	850.3	859.8	868.2	870.6
20°	825.3	831.2	842.0	851.5	855.1
22.5°	805.0	809.8	822.9	834.8	838.4
25°	779.9	787.1	803.8	814.5	819.3
27.5°	753.7	762.1	778.7	793.1	797.8
30°	726.3	734.6	752.5	770.4	776.4
32.5°	697.7	707.2	728.7	746.5	752.5
35°	667.8	676.2	698.8	720.3	727.5
37.5°	636.8	644.0	670.2	692.9	700.0
40°	603.4	613.0	640.4	666.6	673.8
42.5°	570.0	580.8	608.2	636.8	644.0
45°	536.7	548.6	577.2	607.0	615.4
47.5°	504.5	514.0	546.2	574.8	586.7
50°	469.9	479.4	510.4	542.6	554.5
52.5°	434.1	447.2	480.6	511.6	525.9
55°	399.5	412.6	447.2	478.2	491.3
57.5°	367.3	378.0	413.8	446.0	459.1
60°	332.7	342.3	380.4	415.0	426.9
62.5°	295.8	310.1	349.4	381.6	395.9
65°	262.4	277.9	319.6	350.6	364.9
67.5°	231.4	245.7	286.2	319.6	335.1
70°	195.6	214.7	256.4	289.8	304.1
72.5°	167.0	183.7	226.6	260.0	275.5
75°	133.6	153.8	196.8	230.2	242.1
77.5°	106.1	126.4	167.0	193.2	199.2
80°	77.5	97.8	136.0	149.1	152.6
82.5°	52.5	71.6	97.8	101.4	102.6
85°	32.2	44.1	57.2	57.2	57.2
87.5°	15.5	17.9	20.3	19.1	19.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)