

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: P308330

Luminaire Tested: **22FCZ2-20HE-UNV-L82765-RDP-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: P308330
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-24)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 22FCZ2-20HE-UNV-L82765-RDP-CA08-W2A-U-2700K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.08" ACRYLIC SHEET
Light Source: (168) 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: 1195.0 lumens
Efficiency: N/A
Efficacy: 71.6 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.3 / 1.41
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

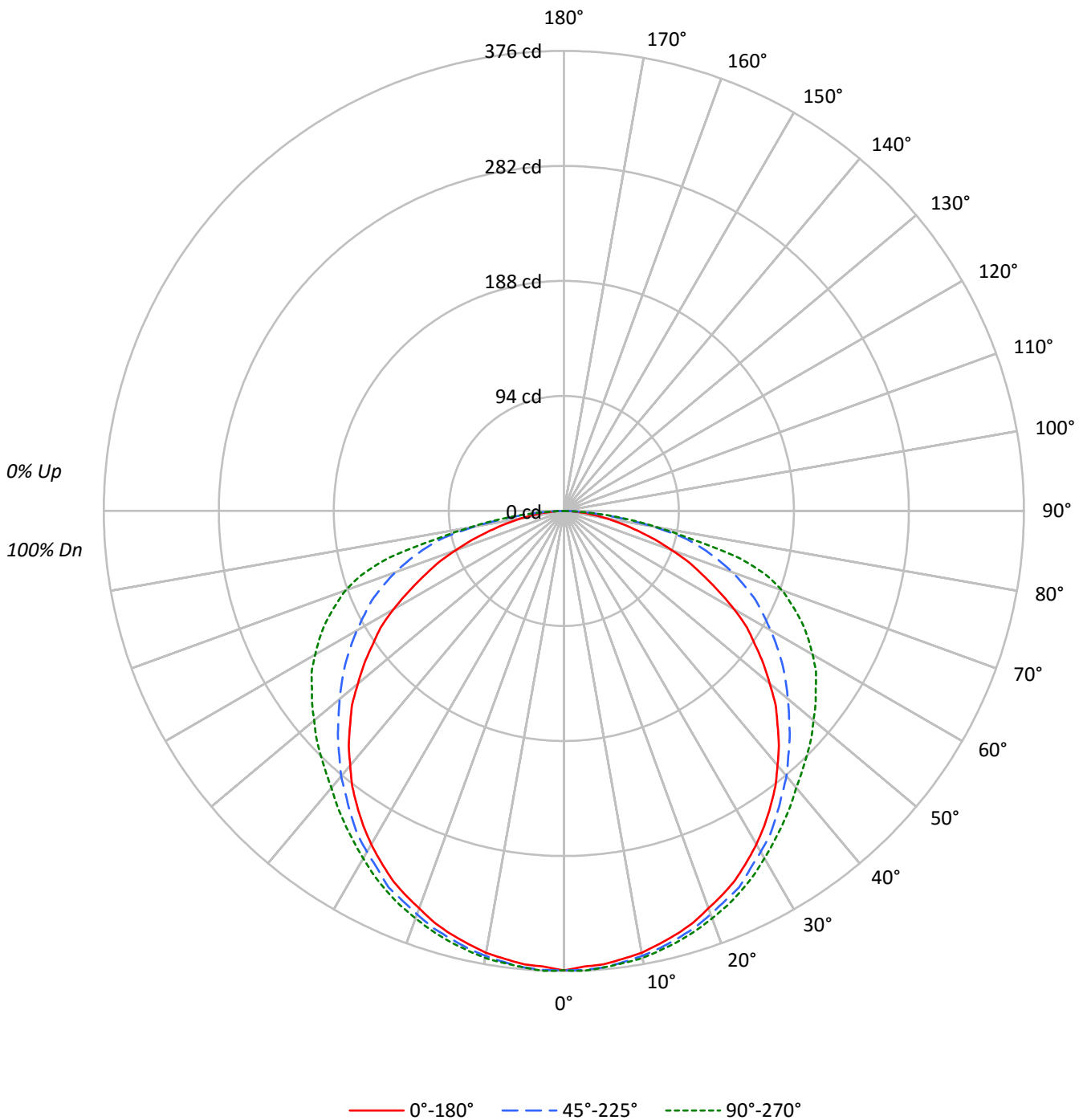
Input Watts (W): 16.7
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	92	89	92	89	86	88	86	84	82
2	97	88	81	75	95	86	80	74	83	77	72	80	75	71	76	72	69	67
3	88	77	68	61	86	75	67	61	72	65	60	70	64	59	67	62	58	55
4	80	68	59	51	78	66	58	51	64	56	50	61	55	50	59	54	49	47
5	74	60	51	44	72	59	50	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	44	38	51	43	38	50	43	37	48	42	37	35
7	63	49	40	33	61	48	39	33	47	39	33	45	38	33	44	37	33	31
8	59	45	36	30	57	44	35	30	43	35	29	41	34	29	40	34	29	27
9	55	41	32	27	53	40	32	27	39	32	26	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°	1010	1010	1010
5°	1005	1012	1012
10°	1002	1009	1014
15°	997	1007	1014
20°	989	1005	1015
25°	987	1007	1018
30°	978	1000	1019
35°	967	996	1025
40°	954	994	1038
45°	940	994	1071
50°	920	1001	1115
55°	895	1023	1179
60°	866	1051	1263
65°	806	1103	1366
70°	740	1155	1494
75°	649	1215	1545
80°	558	1158	1212
85°	488	843	923



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	35.5	3.0
10°-20°	102.0	8.5
20°-30°	155.5	13.0
30°-40°	189.9	15.9
40°-50°	203.1	17.0
50°-60°	196.0	16.4
60°-70°	168.7	14.1
70°-80°	114.2	9.6
80°-90°	30.1	2.5
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°	293.0	24.5
0°-40°	482.9	40.4
0°-60°	882.0	73.8
0°-90°	1195.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1195.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	375	375	375	375	375	
5°	372	373	374	374	374	35
15°	358	359	361	363	364	101
25°	332	334	339	341	343	153
35°	294	297	303	309	312	184
45°	247	251	261	274	281	191
55°	191	197	218	240	251	171
65°	127	139	173	200	214	126
75°	62	83	117	141	149	67
85°	16	22	27	28	30	18
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	375.4	375.4	375.4	375.4	375.4
2.5°	372.7	373.6	375.4	375.4	376.2
5°	371.9	372.7	374.5	374.5	374.5
7.5°	369.2	370.1	371.9	372.7	372.7
10°	366.6	367.5	369.2	370.1	371.0
12.5°	362.2	363.1	365.7	367.5	367.5
15°	357.8	358.7	361.3	363.1	363.9
17.5°	352.5	354.3	356.9	358.7	359.5
20°	345.5	347.2	350.8	353.4	354.3
22.5°	339.3	341.1	344.6	347.2	349.0
25°	332.3	334.1	339.3	341.1	342.8
27.5°	323.5	325.3	329.7	333.2	335.8
30°	314.7	316.5	321.7	326.1	327.9
32.5°	305.0	307.7	313.8	317.4	320.0
35°	294.5	297.1	303.3	309.4	312.1
37.5°	283.9	286.6	292.7	300.6	304.2
40°	271.6	275.2	283.1	293.6	295.4
42.5°	260.2	264.6	271.6	283.9	288.3
45°	247.0	251.4	261.1	274.3	281.3
47.5°	234.7	239.1	249.7	265.5	274.3
50°	219.8	225.9	239.1	257.6	266.4
52.5°	205.7	211.0	228.6	248.8	259.3
55°	190.8	196.9	218.0	240.0	251.4
57.5°	177.6	182.9	206.6	231.2	244.4
60°	160.9	167.9	195.2	221.5	234.7
62.5°	143.3	153.8	183.7	211.0	225.0
65°	126.6	138.9	173.2	200.4	214.5
67.5°	111.6	124.8	160.0	189.0	202.2
70°	94.1	110.8	146.8	174.9	189.9
72.5°	78.2	96.7	131.9	160.0	173.2
75°	62.4	82.6	116.9	140.7	148.6
77.5°	48.3	67.7	100.2	107.2	108.1
80°	36.0	53.6	74.7	75.6	78.2
82.5°	24.6	37.8	48.3	52.7	53.6
85°	15.8	22.0	27.3	28.1	29.9
87.5°	7.0	7.9	9.7	8.8	8.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)