

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: P308331

Luminaire Tested: **22FCZ2-20HE-UNV-L82765-RDP-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: P308331
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-3000K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 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: 1229.0 lumens
Efficiency: N/A
Efficacy: 74.0 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

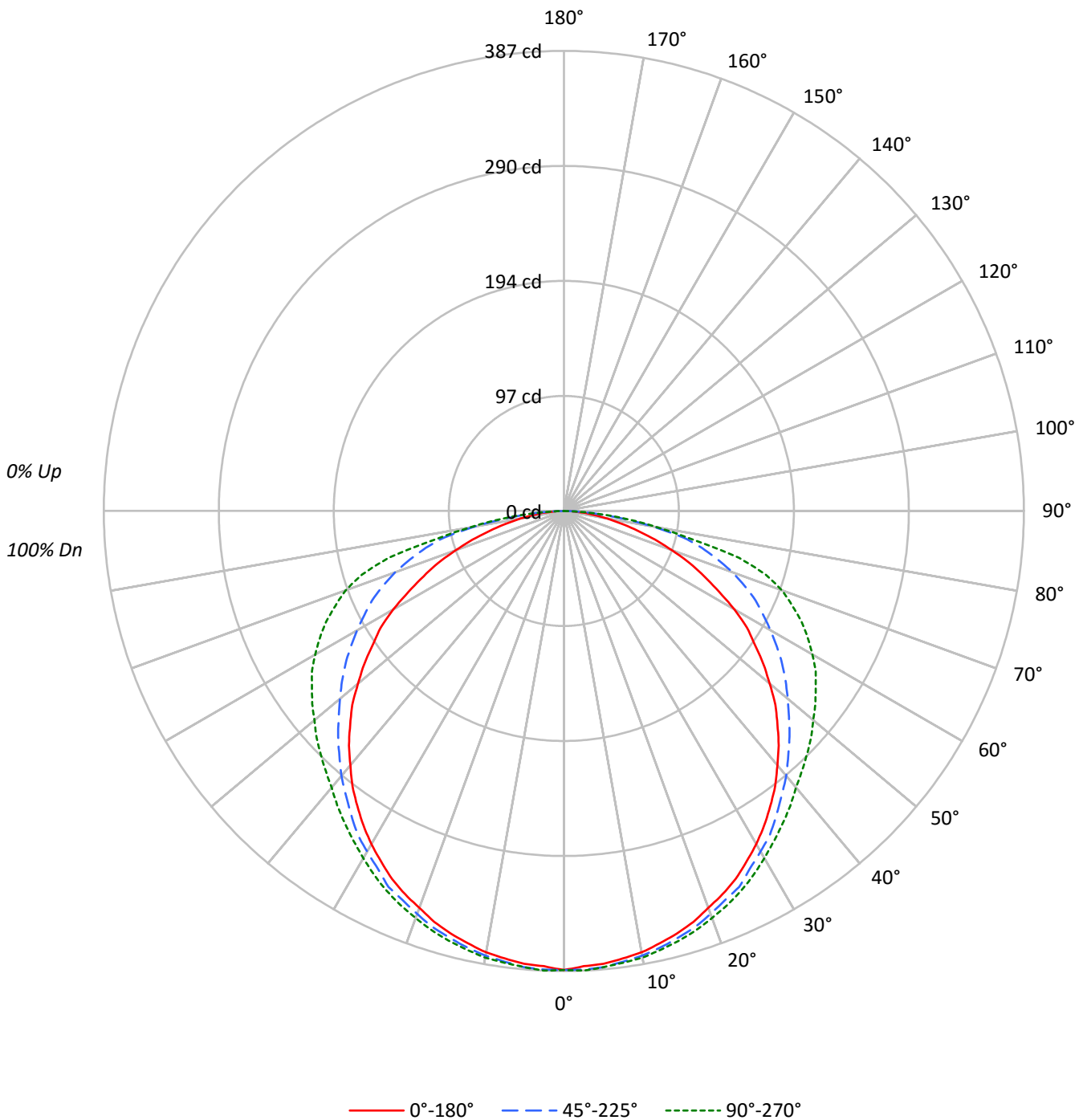
Input Watts (W): 16.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1039	1039	1039
5°	1033	1040	1040
10°	1030	1038	1042
15°	1025	1035	1043
20°	1017	1033	1044
25°	1015	1036	1047
30°	1006	1028	1048
35°	995	1025	1055
40°	981	1023	1067
45°	967	1022	1101
50°	946	1029	1147
55°	920	1052	1213
60°	891	1080	1299
65°	829	1134	1405
70°	761	1188	1537
75°	667	1250	1589
80°	575	1190	1247
85°	503	865	948



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	36.5	3.0
10°-20°	104.9	8.5
20°-30°	160.0	13.0
30°-40°	195.3	15.9
40°-50°	208.8	17.0
50°-60°	201.6	16.4
60°-70°	173.5	14.1
70°-80°	117.4	9.6
80°-90°	31.0	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°	301.3	24.5
0°-40°	496.7	40.4
0°-60°	907.1	73.8
0°-90°	1229.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1229.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	386	386	386	386	386	
5°	382	383	385	385	385	36
15°	368	369	372	373	374	104
25°	342	344	349	351	353	157
35°	303	306	312	318	321	190
45°	254	259	268	282	289	196
55°	196	202	224	247	259	176
65°	130	143	178	206	221	129
75°	64	85	120	145	153	69
85°	16	23	28	29	31	18
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	386.1	386.1	386.1	386.1	386.1
2.5°	383.3	384.2	386.1	386.1	387.0
5°	382.4	383.3	385.1	385.1	385.1
7.5°	379.7	380.6	382.4	383.3	383.3
10°	377.0	377.9	379.7	380.6	381.5
12.5°	372.5	373.4	376.1	377.9	377.9
15°	368.0	368.9	371.6	373.4	374.3
17.5°	362.5	364.4	367.1	368.9	369.8
20°	355.3	357.1	360.7	363.4	364.4
22.5°	349.0	350.8	354.4	357.1	358.9
25°	341.7	343.6	349.0	350.8	352.6
27.5°	332.7	334.5	339.0	342.7	345.4
30°	323.7	325.5	330.9	335.4	337.2
32.5°	313.7	316.4	322.8	326.4	329.1
35°	302.9	305.6	311.9	318.2	321.0
37.5°	292.0	294.7	301.1	309.2	312.8
40°	279.4	283.0	291.1	302.0	303.8
42.5°	267.6	272.1	279.4	292.0	296.5
45°	254.1	258.6	268.5	282.1	289.3
47.5°	241.4	245.9	256.8	273.0	282.1
50°	226.0	232.4	245.9	264.9	273.9
52.5°	211.6	217.0	235.1	255.9	266.7
55°	196.2	202.5	224.2	246.8	258.6
57.5°	182.6	188.1	212.5	237.8	251.3
60°	165.5	172.7	200.7	227.8	241.4
62.5°	147.4	158.2	189.0	217.0	231.4
65°	130.2	142.8	178.1	206.1	220.6
67.5°	114.8	128.4	164.5	194.4	207.9
70°	96.7	113.9	151.0	179.9	195.3
72.5°	80.5	99.5	135.6	164.5	178.1
75°	64.2	85.0	120.2	144.7	152.8
77.5°	49.7	69.6	103.1	110.3	111.2
80°	37.1	55.2	76.8	77.8	80.5
82.5°	25.3	38.9	49.7	54.2	55.2
85°	16.3	22.6	28.0	28.9	30.7
87.5°	7.2	8.1	9.9	9.0	9.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)