

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: P308451

Luminaire Tested: **22FCZ2-29HE-UNV-L82765-RDP-CP187-W2A-U-4500K**

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: P308451
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: 22FCZ2-29HE-UNV-L82765-RDP-CP187-W2A-U-4500K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.187" POLYCARB 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: 1633.0 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

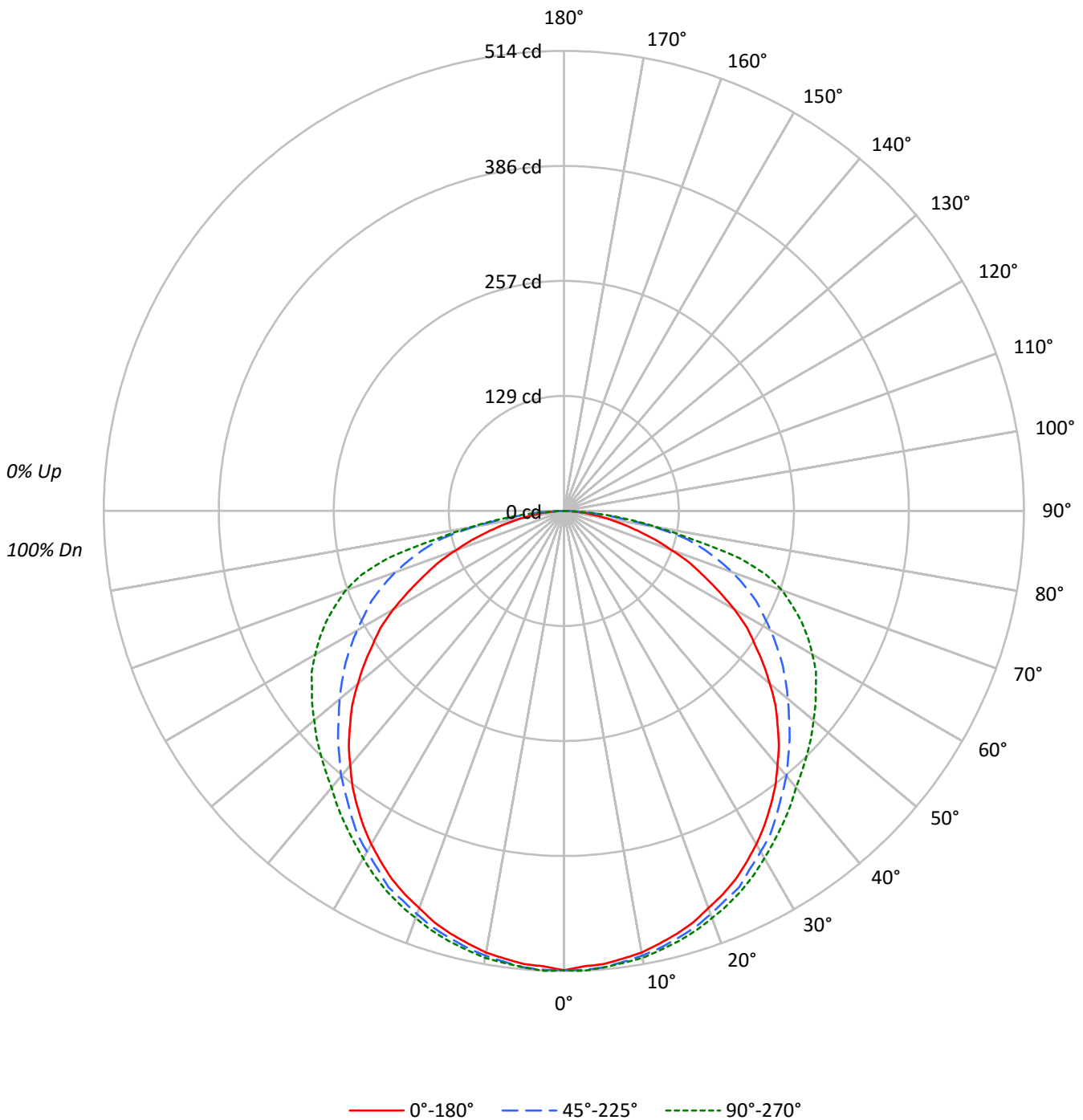
Input Watts (W): 22.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	50	30	10	0	
RCR																						
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100				100
1	108	103	98	94	105	100	96	92	96	92	89	92	89	86	88	86	84	82				82
2	97	88	81	75	95	86	80	74	83	77	72	80	75	71	76	72	69	67				67
3	88	77	68	61	86	75	67	61	72	65	60	70	64	59	67	62	58	55				55
4	80	68	59	51	78	66	58	51	64	56	50	61	55	50	59	54	49	47				47
5	74	60	51	44	72	59	50	44	57	49	43	55	48	43	53	47	42	40				40
6	68	54	45	38	66	53	44	38	51	43	38	50	43	37	48	42	37	35				35
7	63	49	40	33	61	48	39	33	47	39	33	45	38	33	44	37	33	31				31
8	59	45	36	30	57	44	35	30	43	35	29	41	34	29	40	34	29	27				27
9	55	41	32	27	53	40	32	27	39	32	26	38	31	26	37	31	26	24				24
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22				22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1380	1380	1380
5°	1373	1383	1383
10°	1369	1379	1385
15°	1362	1375	1385
20°	1352	1373	1386
25°	1348	1377	1391
30°	1336	1366	1392
35°	1322	1361	1401
40°	1304	1359	1418
45°	1285	1358	1463
50°	1257	1368	1524
55°	1223	1398	1612
60°	1183	1435	1726
65°	1102	1507	1866
70°	1011	1578	2042
75°	887	1661	2111
80°	764	1582	1657
85°	667	1149	1260



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	48.5	3.0
10°-20°	139.3	8.5
20°-30°	212.6	13.0
30°-40°	259.5	15.9
40°-50°	277.5	17.0
50°-60°	267.8	16.4
60°-70°	230.6	14.1
70°-80°	156.0	9.6
80°-90°	41.2	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°	400.4	24.5
0°-40°	659.9	40.4
0°-60°	1205.3	73.8
0°-90°	1633.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1633.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	513	513	513	513	513	
5°	508	509	512	512	512	48
15°	489	490	494	496	497	138
25°	454	456	464	466	468	209
35°	402	406	414	423	426	252
45°	338	344	357	375	384	261
55°	261	269	298	328	344	234
65°	173	190	237	274	293	172
75°	85	113	160	192	203	92
85°	22	30	37	38	41	24
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	513.0	513.0	513.0	513.0	513.0
2.5°	509.3	510.6	513.0	513.0	514.2
5°	508.1	509.3	511.8	511.8	511.8
7.5°	504.5	505.7	508.1	509.3	509.3
10°	500.9	502.1	504.5	505.7	506.9
12.5°	494.9	496.1	499.7	502.1	502.1
15°	488.9	490.1	493.7	496.1	497.3
17.5°	481.7	484.1	487.7	490.1	491.3
20°	472.1	474.5	479.3	482.9	484.1
22.5°	463.7	466.1	470.9	474.5	476.9
25°	454.1	456.5	463.7	466.1	468.5
27.5°	442.1	444.5	450.5	455.3	458.9
30°	430.1	432.5	439.7	445.7	448.1
32.5°	416.8	420.5	428.9	433.7	437.3
35°	402.4	406.0	414.4	422.9	426.5
37.5°	388.0	391.6	400.0	410.8	415.6
40°	371.2	376.0	386.8	401.2	403.6
42.5°	355.6	361.6	371.2	388.0	394.0
45°	337.6	343.6	356.8	374.8	384.4
47.5°	320.7	326.8	341.2	362.8	374.8
50°	300.3	308.7	326.8	352.0	364.0
52.5°	281.1	288.3	312.3	340.0	354.4
55°	260.7	269.1	297.9	328.0	343.6
57.5°	242.7	249.9	282.3	315.9	334.0
60°	219.8	229.4	266.7	302.7	320.7
62.5°	195.8	210.2	251.1	288.3	307.5
65°	173.0	189.8	236.7	273.9	293.1
67.5°	152.6	170.6	218.6	258.3	276.3
70°	128.5	151.4	200.6	239.1	259.5
72.5°	106.9	132.1	180.2	218.6	236.7
75°	85.3	112.9	159.8	192.2	203.0
77.5°	66.1	92.5	136.9	146.6	147.8
80°	49.3	73.3	102.1	103.3	106.9
82.5°	33.6	51.7	66.1	72.1	73.3
85°	21.6	30.0	37.2	38.4	40.8
87.5°	9.6	10.8	13.2	12.0	12.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)