

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: P313030

Luminaire Tested: **22FCZ2-44HE-UNV-L83050-S-CP187-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: P313030
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: 22FCZ2-44HE-UNV-L83050-S-CP187-W2A-U-3000K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS, 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: 3711.0 lumens
Efficiency: N/A
Efficacy: 100.0 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

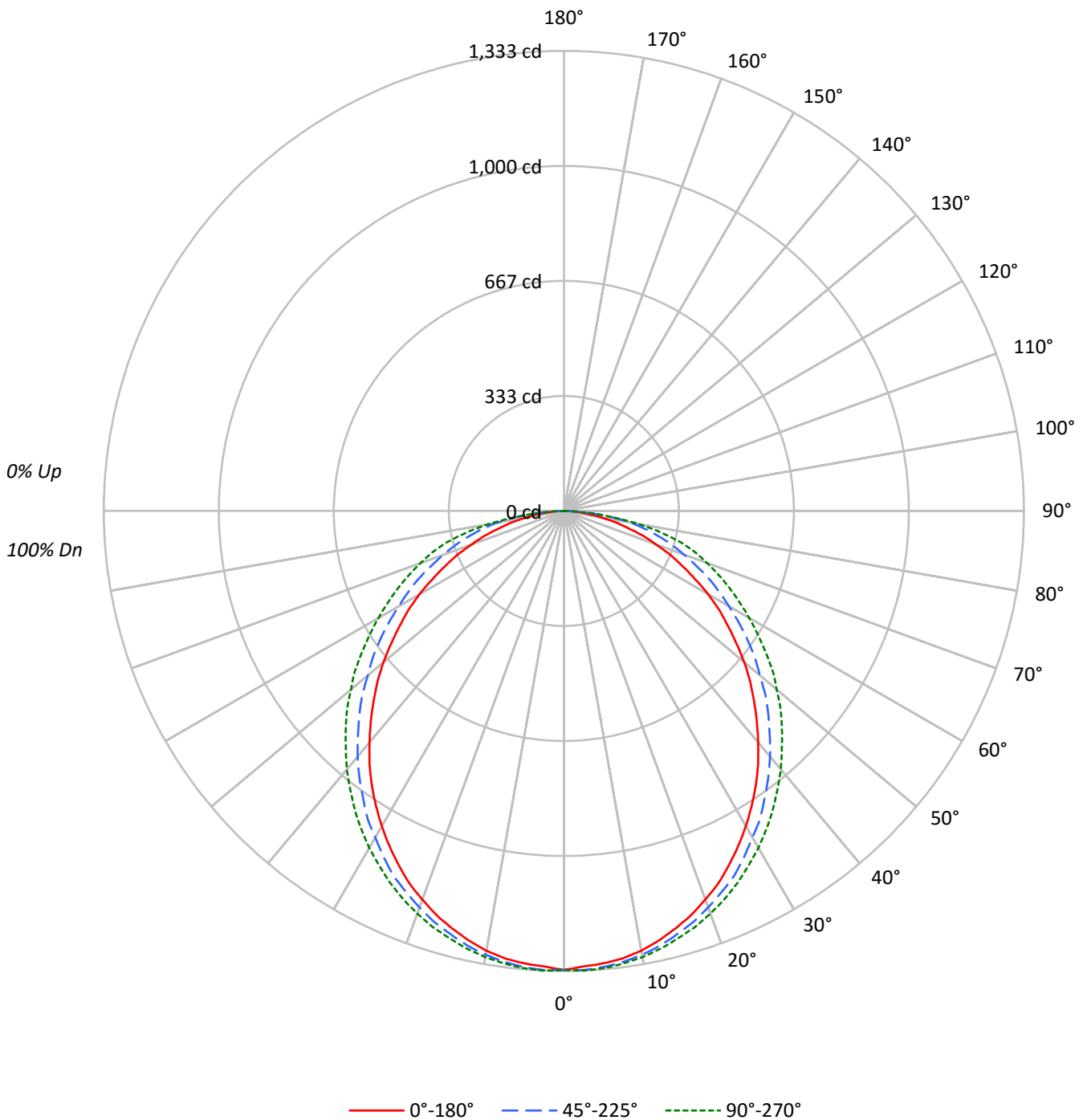
Input Watts (W): 37.1
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	3578	3578	3578
5°	3555	3583	3592
10°	3534	3567	3586
15°	3488	3536	3570
20°	3431	3501	3555
25°	3362	3465	3532
30°	3277	3395	3503
35°	3185	3333	3470
40°	3078	3266	3437
45°	2965	3189	3400
50°	2856	3103	3370
55°	2721	3046	3347
60°	2600	2972	3336
65°	2425	2954	3373
70°	2234	2929	3474
75°	2016	2970	3655
80°	1743	3059	3434
85°	1442	2566	2566



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	125.8	3.4
10°-20°	357.9	9.6
20°-30°	535.5	14.4
30°-40°	634.1	17.1
40°-50°	646.3	17.4
50°-60°	579.2	15.6
60°-70°	453.5	12.2
70°-80°	292.4	7.9
80°-90°	86.4	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°	1019.1	27.5
0°-40°	1653.2	44.5
0°-60°	2878.7	77.6
0°-90°	3711.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3711.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1330	1330	1330	1330	1330	
5°	1316	1319	1326	1328	1330	125
15°	1252	1259	1269	1280	1281	353
25°	1132	1143	1167	1183	1190	521
35°	970	982	1015	1046	1056	606
45°	779	796	838	881	893	602
55°	580	599	649	694	713	520
65°	381	403	464	509	530	378
75°	194	223	286	334	352	208
85°	47	64	83	83	83	55
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1329.8	1329.8	1329.8	1329.8	1329.8
2.5°	1321.1	1324.6	1331.5	1333.2	1333.2
5°	1315.9	1319.4	1326.3	1328.0	1329.8
7.5°	1307.3	1309.0	1317.6	1321.1	1322.8
10°	1293.4	1296.9	1305.5	1310.7	1312.5
12.5°	1274.4	1279.6	1289.9	1296.9	1298.6
15°	1251.9	1258.8	1269.2	1279.6	1281.3
17.5°	1227.6	1234.5	1248.4	1260.5	1264.0
20°	1198.2	1206.8	1222.4	1236.3	1241.5
22.5°	1168.7	1175.7	1194.7	1212.0	1217.2
25°	1132.4	1142.8	1167.0	1182.6	1189.5
27.5°	1094.3	1106.4	1130.6	1151.4	1158.4
30°	1054.5	1066.6	1092.6	1118.5	1127.2
32.5°	1012.9	1026.8	1057.9	1083.9	1092.6
35°	969.6	981.7	1014.6	1045.8	1056.2
37.5°	924.6	935.0	973.1	1006.0	1016.4
40°	876.1	890.0	929.8	967.9	978.3
42.5°	827.6	843.2	883.0	924.6	935.0
45°	779.2	796.5	838.0	881.3	893.4
47.5°	732.4	746.3	793.0	834.6	851.9
50°	682.2	696.0	741.1	787.8	805.1
52.5°	630.3	649.3	697.8	742.8	763.6
55°	580.0	599.1	649.3	694.3	713.4
57.5°	533.3	548.9	600.8	647.6	666.6
60°	483.1	496.9	552.3	602.6	619.9
62.5°	429.4	450.2	507.3	554.1	574.8
65°	380.9	403.4	464.0	509.1	529.8
67.5°	335.9	356.7	415.6	464.0	486.5
70°	284.0	311.7	372.3	420.7	441.5
72.5°	242.4	266.6	329.0	377.5	400.0
75°	193.9	223.4	285.7	334.2	351.5
77.5°	154.1	183.5	242.4	280.5	289.2
80°	112.5	142.0	197.4	216.4	221.6
82.5°	76.2	103.9	142.0	147.2	148.9
85°	46.7	64.1	83.1	83.1	83.1
87.5°	22.5	26.0	29.4	27.7	27.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)