

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: P312842

Luminaire Tested: **22FCZ2-39HE-UNV-L83050-CA08-W2A-U-4000K**

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: P312842
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-33)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 22FCZ2-39HE-UNV-L83050-CA08-W2A-U-4000K
Description: 2'X2' TROFFER LED MODULE, RIBBED LENS, 0.08" ACRYLIC SHEET
Light Source: (168) 4000K 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: 3725.0 lumens
Efficiency: N/A
Efficacy: 112.5 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.28 / 1.37
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

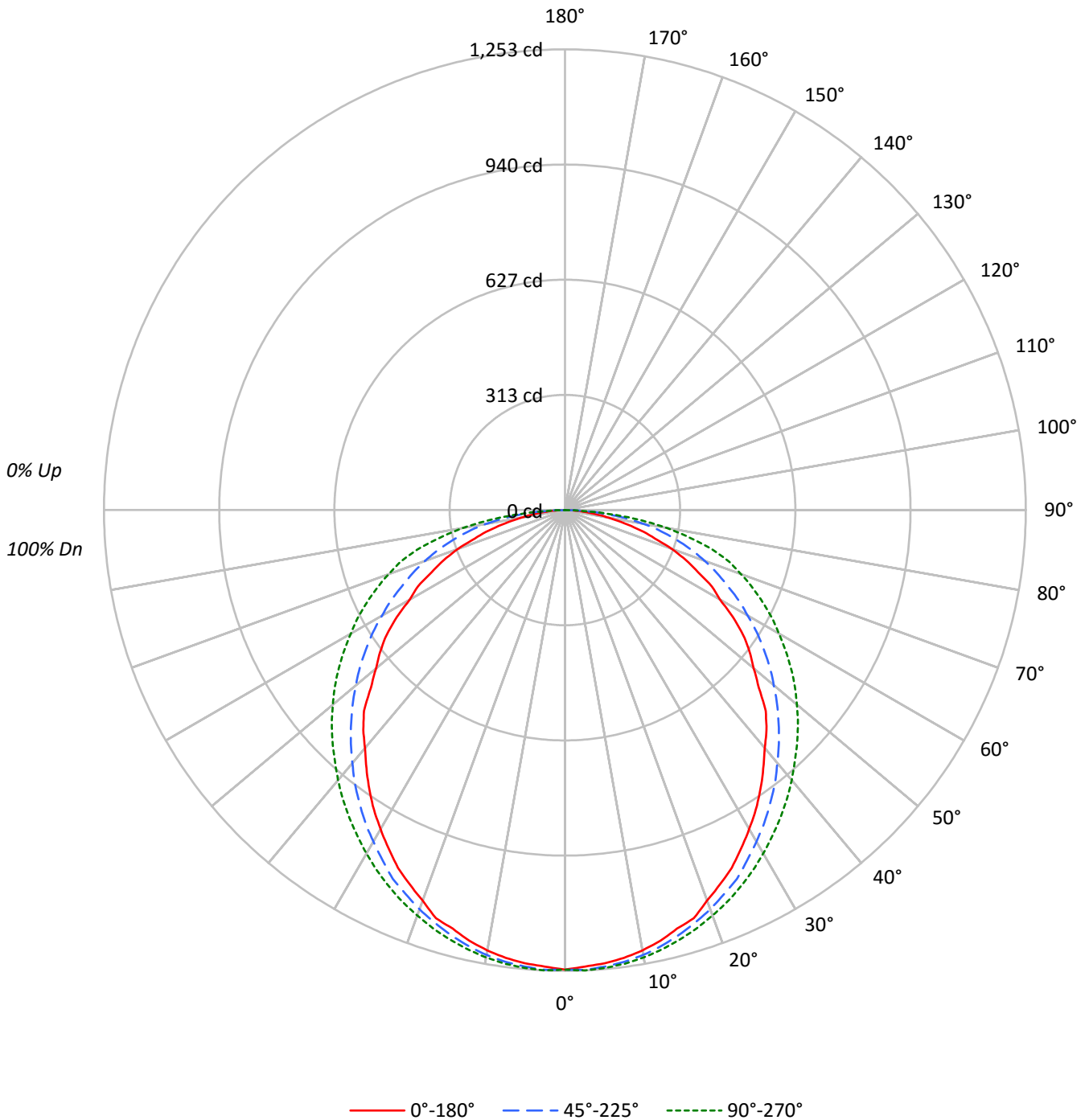
Input Watts (W): 33.1
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	98	94	105	100	96	92	96	93	90	92	89	87	89	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	59	56
4	81	69	60	53	79	67	59	52	65	57	51	62	56	51	60	55	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	39	51	44	38	49	43	38	36
7	64	50	41	35	62	49	40	34	47	40	34	46	39	34	45	38	34	32
8	59	45	37	31	58	45	36	31	43	36	30	42	35	30	41	35	30	28
9	55	42	33	28	54	41	33	28	40	33	27	39	32	27	38	32	27	25
10	52	38	30	25	51	38	30	25	37	30	25	36	29	25	35	29	25	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3363	3363	3363
5°	3342	3366	3376
10°	3322	3357	3376
15°	3283	3333	3368
20°	3237	3308	3359
25°	3187	3287	3356
30°	3113	3235	3352
35°	3046	3198	3356
40°	2969	3157	3370
45°	2938	3128	3399
50°	2806	3105	3448
55°	2777	3095	3521
60°	2619	3090	3617
65°	2543	3110	3780
70°	2441	3184	4012
75°	2224	3281	4319
80°	1906	3398	4365
85°	1541	3248	3742



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	118.3	3.2
10°-20°	337.4	9.1
20°-30°	507.7	13.6
30°-40°	609.4	16.4
40°-50°	636.9	17.1
50°-60°	593.6	15.9
60°-70°	486.8	13.1
70°-80°	328.0	8.8
80°-90°	106.8	2.9
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°	963.4	25.9
0°-40°	1572.8	42.2
0°-60°	2803.3	75.3
0°-90°	3725.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3725.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1250	1250	1250	1250	1250	
5°	1237	1241	1246	1248	1250	117
15°	1178	1186	1196	1207	1209	333
25°	1073	1080	1107	1123	1130	493
35°	927	940	973	1007	1022	580
45°	772	777	822	872	893	590
55°	592	603	660	722	751	524
65°	399	417	488	560	594	397
75°	214	237	316	387	415	225
85°	50	71	105	123	121	59
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1249.8	1249.8	1249.8	1249.8	1249.8
2.5°	1242.6	1246.2	1251.6	1253.3	1253.3
5°	1237.3	1240.9	1246.2	1248.0	1249.8
7.5°	1228.4	1231.9	1239.1	1242.6	1244.4
10°	1215.9	1219.5	1228.4	1233.7	1235.5
12.5°	1199.8	1203.4	1214.1	1221.2	1223.0
15°	1178.5	1185.6	1196.3	1207.0	1208.8
17.5°	1164.2	1162.4	1176.7	1189.2	1192.7
20°	1130.3	1139.2	1155.3	1169.5	1173.1
22.5°	1101.8	1108.9	1130.3	1146.4	1153.5
25°	1073.3	1080.4	1107.1	1123.2	1130.3
27.5°	1037.6	1048.3	1073.3	1096.4	1105.4
30°	1002.0	1012.7	1041.2	1067.9	1078.6
32.5°	966.3	978.8	1009.1	1037.6	1050.1
35°	927.1	939.6	973.4	1007.3	1021.6
37.5°	886.1	902.1	937.8	975.2	991.3
40°	845.1	861.1	898.6	941.3	959.2
42.5°	811.2	818.3	861.1	907.5	925.3
45°	772.0	777.3	821.9	871.8	893.2
47.5°	714.9	734.5	782.7	837.9	859.3
50°	670.3	691.7	741.7	800.5	823.7
52.5°	632.9	647.2	702.4	761.3	788.0
55°	591.9	602.6	659.6	722.0	750.6
57.5°	542.0	561.6	618.6	682.8	711.4
60°	486.7	511.7	574.1	643.6	672.1
62.5°	451.1	465.3	533.1	602.6	634.7
65°	399.4	417.2	488.5	559.8	593.7
67.5°	356.6	374.4	447.5	518.8	552.7
70°	310.2	328.0	404.7	476.0	509.9
72.5°	256.7	281.7	361.9	433.2	468.9
75°	213.9	237.1	315.6	386.9	415.4
77.5°	165.8	196.1	269.2	328.0	349.4
80°	123.0	153.3	219.3	262.1	281.7
82.5°	83.8	114.1	164.0	196.1	206.8
85°	49.9	71.3	105.2	123.0	121.2
87.5°	23.2	30.3	42.8	42.8	41.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)