

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: P312852

Luminaire Tested: **22FCZ2-39HE-UNV-L83050-CP125-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: P312852
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-CP125-W2A-U-4000K
Description: 2'X2' TROFFER LED MODULE, RIBBED LENS, 0.125" POLYCARB 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: 3639.0 lumens
Efficiency: N/A
Efficacy: 109.9 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

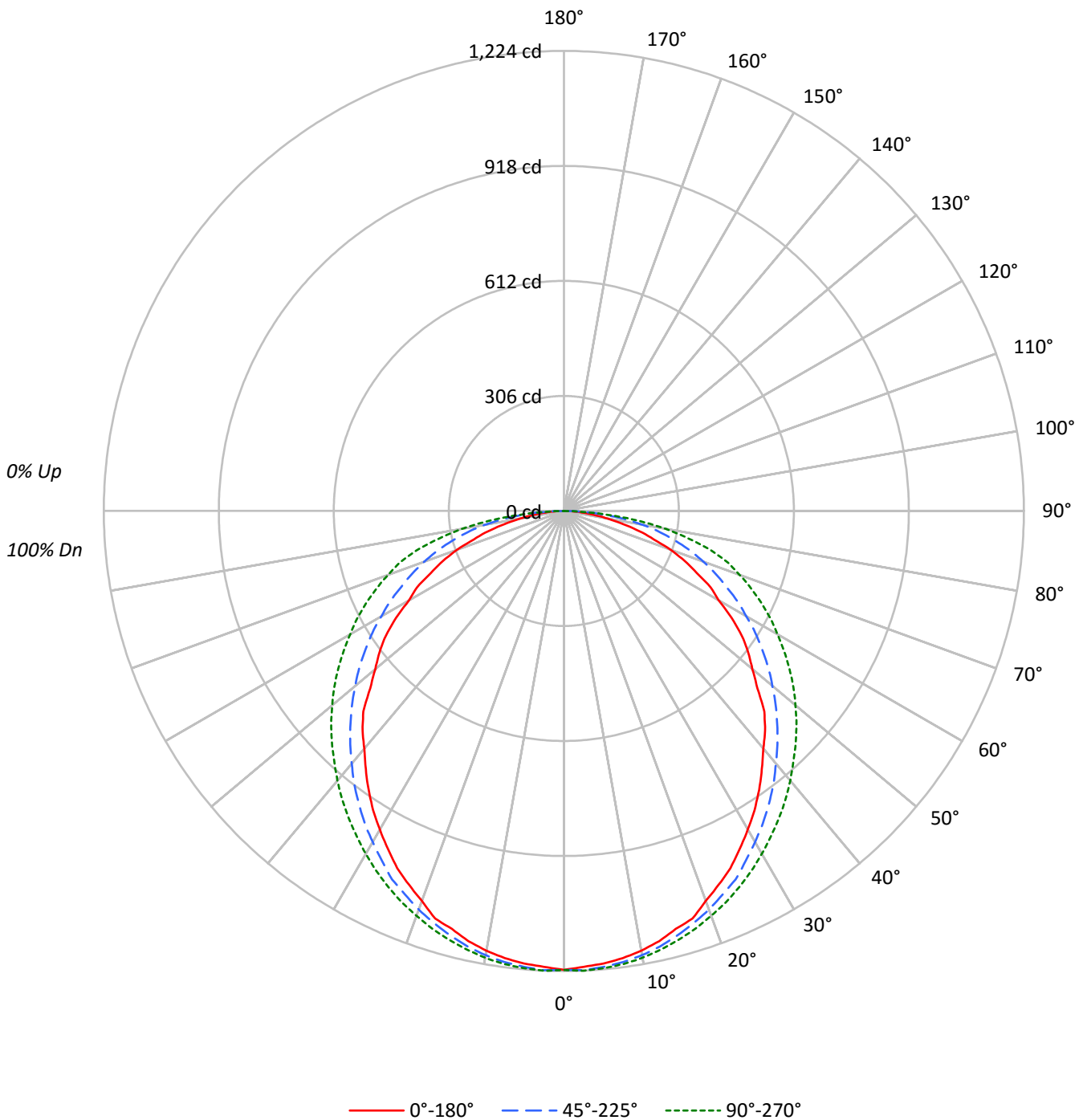
Input Watts (W): 33.1
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	3285	3285	3285
5°	3265	3289	3298
10°	3246	3279	3298
15°	3207	3256	3290
20°	3162	3232	3282
25°	3113	3211	3279
30°	3041	3160	3274
35°	2975	3124	3279
40°	2900	3084	3292
45°	2870	3056	3321
50°	2742	3033	3369
55°	2713	3023	3440
60°	2559	3018	3534
65°	2484	3039	3693
70°	2385	3111	3919
75°	2173	3205	4219
80°	1863	3319	4265
85°	1507	3174	3656



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	115.5	3.2
10°-20°	329.6	9.1
20°-30°	496.0	13.6
30°-40°	595.3	16.4
40°-50°	622.2	17.1
50°-60°	579.9	15.9
60°-70°	475.6	13.1
70°-80°	320.5	8.8
80°-90°	104.4	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°	941.1	25.9
0°-40°	1536.4	42.2
0°-60°	2738.5	75.3
0°-90°	3639.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3639.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1221	1221	1221	1221	1221	
5°	1209	1212	1217	1219	1221	115
15°	1151	1158	1169	1179	1181	325
25°	1048	1056	1082	1097	1104	482
35°	906	918	951	984	998	566
45°	754	759	803	852	873	576
55°	578	589	644	705	733	512
65°	390	408	477	547	580	388
75°	209	232	308	378	406	220
85°	49	70	103	120	118	58
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1220.9	1220.9	1220.9	1220.9	1220.9
2.5°	1213.9	1217.4	1222.7	1224.4	1224.4
5°	1208.7	1212.2	1217.4	1219.2	1220.9
7.5°	1200.0	1203.5	1210.5	1213.9	1215.7
10°	1187.8	1191.3	1200.0	1205.2	1207.0
12.5°	1172.1	1175.6	1186.1	1193.0	1194.8
15°	1151.2	1158.2	1168.7	1179.1	1180.9
17.5°	1137.3	1135.6	1149.5	1161.7	1165.2
20°	1104.2	1112.9	1128.6	1142.5	1146.0
22.5°	1076.4	1083.3	1104.2	1119.9	1126.9
25°	1048.5	1055.5	1081.6	1097.3	1104.2
27.5°	1013.7	1024.1	1048.5	1071.1	1079.8
30°	978.8	989.3	1017.1	1043.3	1053.7
32.5°	944.0	956.2	985.8	1013.7	1025.8
35°	905.7	917.9	951.0	984.0	998.0
37.5°	865.6	881.3	916.1	952.7	968.4
40°	825.6	841.2	877.8	919.6	937.0
42.5°	792.5	799.4	841.2	886.5	903.9
45°	754.1	759.4	802.9	851.7	872.6
47.5°	698.4	717.6	764.6	818.6	839.5
50°	654.9	675.8	724.5	782.0	804.7
52.5°	618.3	632.2	686.2	743.7	769.8
55°	578.2	588.7	644.4	705.4	733.2
57.5°	529.5	548.6	604.4	667.1	694.9
60°	475.5	499.9	560.8	628.7	656.6
62.5°	440.6	454.6	520.8	588.7	620.0
65°	390.1	407.6	477.2	546.9	580.0
67.5°	348.3	365.8	437.2	506.8	539.9
70°	303.1	320.5	395.4	465.0	498.1
72.5°	250.8	275.2	353.6	423.2	458.1
75°	209.0	231.6	308.3	377.9	405.8
77.5°	162.0	191.6	263.0	320.5	341.4
80°	120.2	149.8	214.2	256.0	275.2
82.5°	81.9	111.5	160.2	191.6	202.0
85°	48.8	69.7	102.8	120.2	118.4
87.5°	22.6	29.6	41.8	41.8	40.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)