

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: P308786

Luminaire Tested: **22FCZ2-39HE-UNV-L82765-CA08-W2A-U-5500K**

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: P308786
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-L82765-CA08-W2A-U-5500K
Description: 2'X2' TROFFER LED MODULE, RIBBED LENS, 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: 3689.0 lumens
Efficiency: N/A
Efficacy: 110.8 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

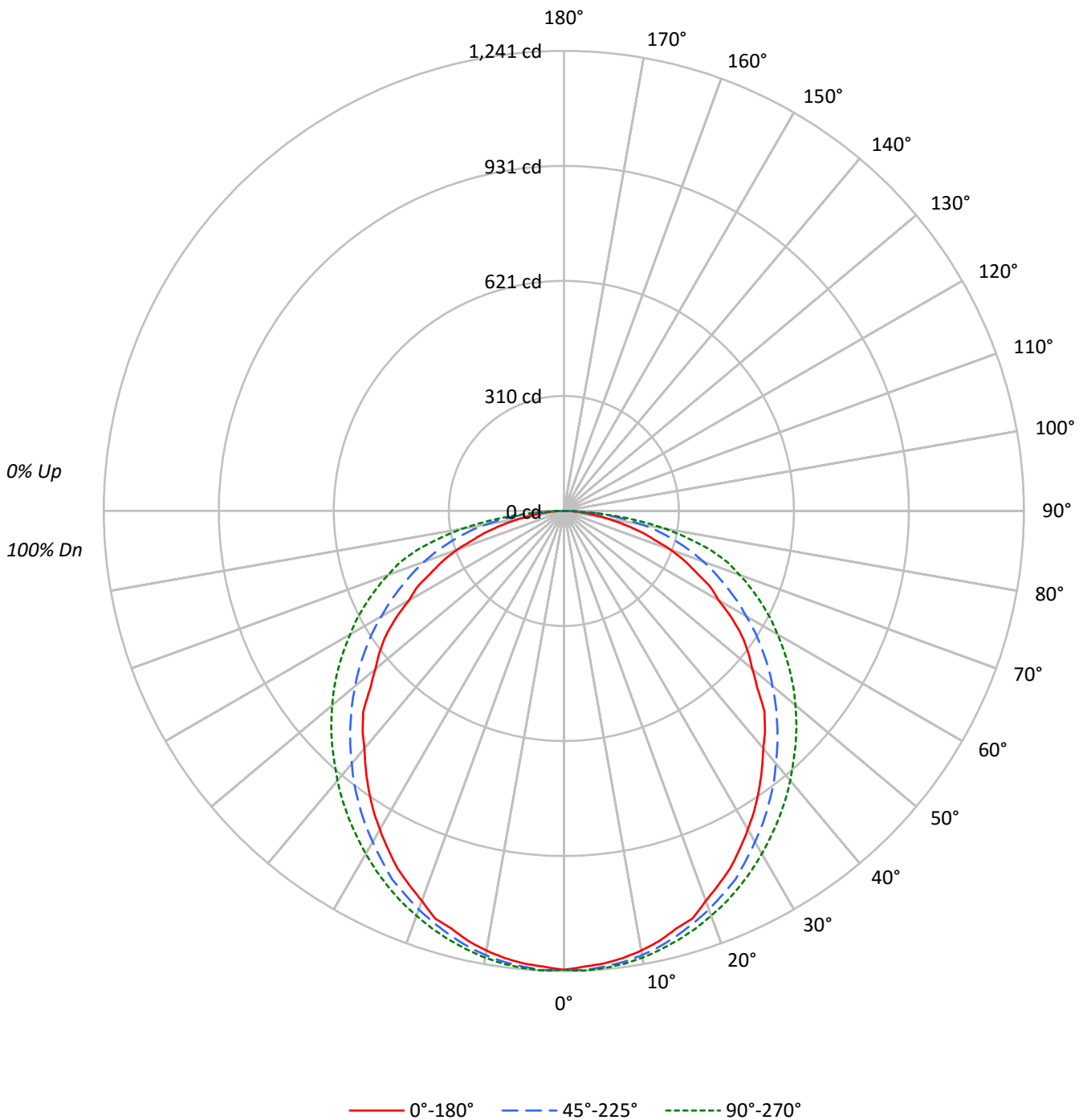
Input Watts (W): 33.3
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	3331	3331	3331
5°	3310	3334	3343
10°	3290	3324	3343
15°	3251	3300	3335
20°	3206	3276	3327
25°	3156	3255	3324
30°	3083	3204	3319
35°	3016	3167	3324
40°	2940	3126	3337
45°	2909	3097	3366
50°	2779	3075	3415
55°	2750	3065	3487
60°	2594	3060	3582
65°	2518	3081	3743
70°	2417	3153	3973
75°	2203	3249	4277
80°	1888	3366	4324
85°	1525	3217	3708



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	117.1	3.2
10°-20°	334.1	9.1
20°-30°	502.8	13.6
30°-40°	603.5	16.4
40°-50°	630.8	17.1
50°-60°	587.8	15.9
60°-70°	482.1	13.1
70°-80°	324.9	8.8
80°-90°	105.8	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°	954.0	25.9
0°-40°	1557.6	42.2
0°-60°	2776.2	75.3
0°-90°	3689.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3689.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1238	1238	1238	1238	1238	
5°	1225	1229	1234	1236	1238	116
15°	1167	1174	1185	1195	1197	330
25°	1063	1070	1096	1112	1119	489
35°	918	930	964	998	1012	574
45°	764	770	814	863	885	584
55°	586	597	653	715	743	519
65°	396	413	484	554	588	393
75°	212	235	312	383	411	223
85°	49	71	104	122	120	59
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1237.7	1237.7	1237.7	1237.7	1237.7
2.5°	1230.6	1234.2	1239.5	1241.2	1241.2
5°	1225.3	1228.9	1234.2	1235.9	1237.7
7.5°	1216.5	1220.0	1227.1	1230.6	1232.4
10°	1204.1	1207.7	1216.5	1221.8	1223.6
12.5°	1188.3	1191.8	1202.4	1209.4	1211.2
15°	1167.1	1174.1	1184.7	1195.3	1197.1
17.5°	1152.9	1151.2	1165.3	1177.7	1181.2
20°	1119.4	1128.2	1144.1	1158.2	1161.8
22.5°	1091.1	1098.2	1119.4	1135.3	1142.3
25°	1062.9	1070.0	1096.4	1112.3	1119.4
27.5°	1027.6	1038.2	1062.9	1085.8	1094.7
30°	992.3	1002.9	1031.1	1057.6	1068.2
32.5°	957.0	969.3	999.3	1027.6	1039.9
35°	918.1	930.5	964.0	997.6	1011.7
37.5°	877.5	893.4	928.7	965.8	981.7
40°	836.9	852.8	889.9	932.2	949.9
42.5°	803.4	810.4	852.8	898.7	916.4
45°	764.5	769.8	813.9	863.4	884.6
47.5°	708.0	727.4	775.1	829.8	851.0
50°	663.9	685.1	734.5	792.8	815.7
52.5°	626.8	640.9	695.6	753.9	780.4
55°	586.2	596.8	653.3	715.1	743.3
57.5°	536.7	556.2	612.7	676.2	704.5
60°	482.0	506.7	568.5	637.4	665.6
62.5°	446.7	460.8	527.9	596.8	628.6
65°	395.5	413.2	483.8	554.4	587.9
67.5°	353.1	370.8	443.2	513.8	547.3
70°	307.2	324.9	400.8	471.4	505.0
72.5°	254.2	279.0	358.4	429.0	464.4
75°	211.9	234.8	312.5	383.1	411.4
77.5°	164.2	194.2	266.6	324.9	346.1
80°	121.8	151.8	217.2	259.5	279.0
82.5°	83.0	113.0	162.4	194.2	204.8
85°	49.4	70.6	104.2	121.8	120.1
87.5°	23.0	30.0	42.4	42.4	40.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)