

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: P312847

Luminaire Tested: **22FCZ2-39HE-UNV-L83050-CA125-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: P312847
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-CA125-W2A-U-4000K
Description: 2'X2' TROFFER LED MODULE, RIBBED LENS, 0.125" 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: 3711.0 lumens
Efficiency: N/A
Efficacy: 112.1 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

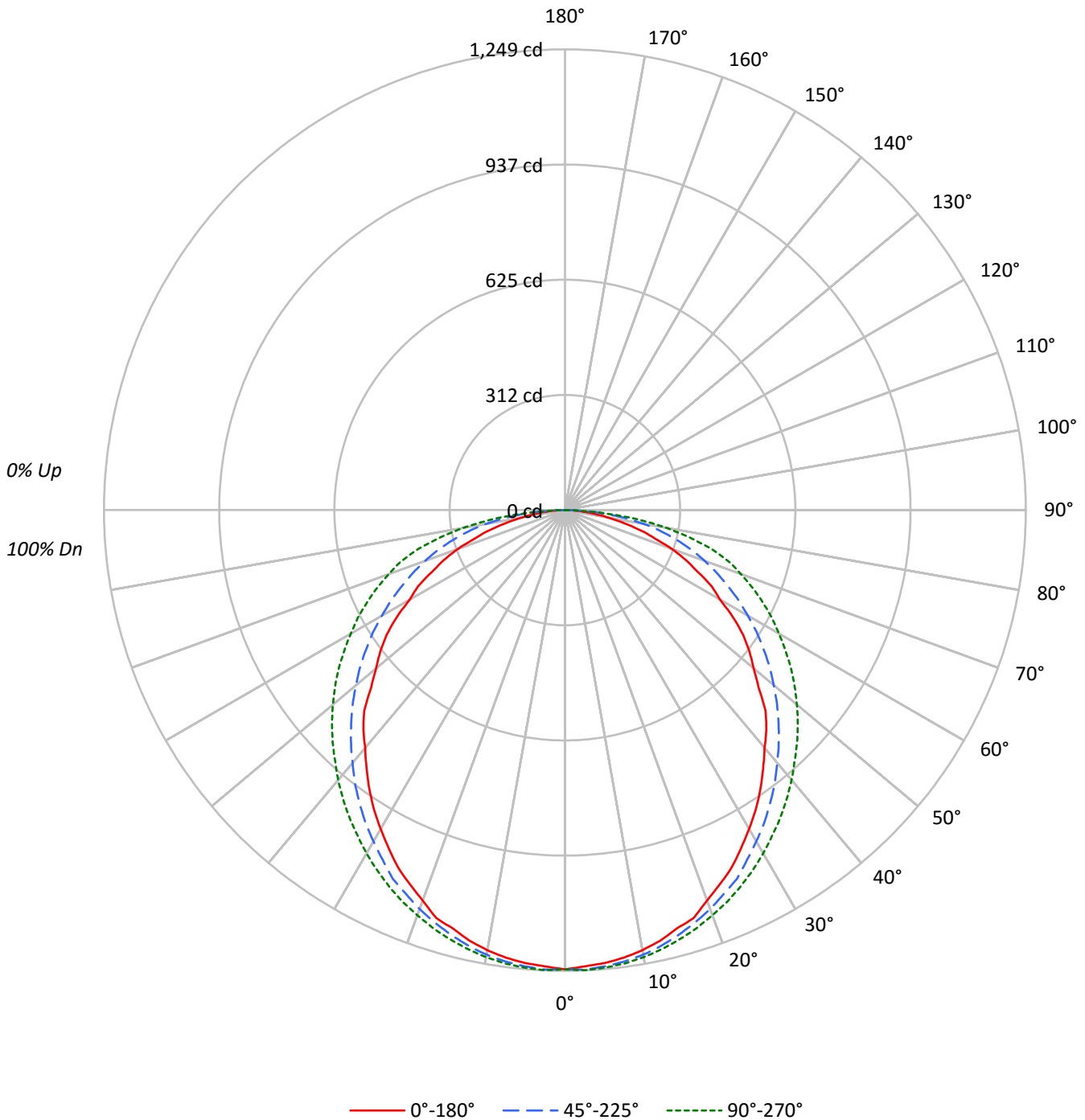
Input Watts (W): 33.1
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	3351	3351	3351
5°	3330	3354	3363
10°	3310	3344	3363
15°	3271	3320	3355
20°	3225	3296	3347
25°	3175	3275	3344
30°	3102	3223	3339
35°	3034	3186	3343
40°	2957	3145	3357
45°	2927	3116	3386
50°	2796	3093	3435
55°	2767	3083	3508
60°	2610	3078	3604
65°	2534	3099	3766
70°	2431	3172	3997
75°	2216	3269	4302
80°	1900	3386	4348
85°	1535	3236	3730



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	117.8	3.2
10°-20°	336.1	9.1
20°-30°	505.8	13.6
30°-40°	607.1	16.4
40°-50°	634.5	17.1
50°-60°	591.3	15.9
60°-70°	485.0	13.1
70°-80°	326.8	8.8
80°-90°	106.4	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°	959.7	25.9
0°-40°	1566.8	42.2
0°-60°	2792.7	75.3
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°	1245	1245	1245	1245	1245	
5°	1233	1236	1242	1243	1245	117
15°	1174	1181	1192	1202	1204	332
25°	1069	1076	1103	1119	1126	492
35°	924	936	970	1004	1018	577
45°	769	774	819	868	890	587
55°	590	600	657	719	748	522
65°	398	416	487	558	592	396
75°	213	236	314	385	414	224
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°	1245.1	1245.1	1245.1	1245.1	1245.1
2.5°	1238.0	1241.5	1246.8	1248.6	1248.6
5°	1232.6	1236.2	1241.5	1243.3	1245.1
7.5°	1223.8	1227.3	1234.4	1238.0	1239.7
10°	1211.3	1214.9	1223.8	1229.1	1230.9
12.5°	1195.3	1198.9	1209.5	1216.7	1218.4
15°	1174.0	1181.1	1191.8	1202.4	1204.2
17.5°	1159.8	1158.0	1172.3	1184.7	1188.2
20°	1126.1	1135.0	1150.9	1165.1	1168.7
22.5°	1097.7	1104.8	1126.1	1142.1	1149.2
25°	1069.2	1076.3	1103.0	1119.0	1126.1
27.5°	1033.7	1044.4	1069.2	1092.3	1101.2
30°	998.2	1008.8	1037.3	1063.9	1074.6
32.5°	962.7	975.1	1005.3	1033.7	1046.1
35°	923.6	936.0	969.8	1003.5	1017.7
37.5°	882.7	898.7	934.2	971.5	987.5
40°	841.9	857.9	895.2	937.8	955.6
42.5°	808.1	815.2	857.9	904.1	921.8
45°	769.1	774.4	818.8	868.5	889.8
47.5°	712.2	731.8	779.7	834.8	856.1
50°	667.8	689.1	738.9	797.5	820.6
52.5°	630.5	644.7	699.8	758.4	785.1
55°	589.7	600.3	657.2	719.3	747.8
57.5°	539.9	559.5	616.3	680.3	708.7
60°	484.9	509.8	571.9	641.2	669.6
62.5°	449.4	463.6	531.1	600.3	632.3
65°	397.9	415.6	486.7	557.7	591.5
67.5°	355.2	373.0	445.8	516.9	550.6
70°	309.0	326.8	403.2	474.2	508.0
72.5°	255.8	280.6	360.6	431.6	467.1
75°	213.1	236.2	314.4	385.4	413.8
77.5°	165.2	195.4	268.2	326.8	348.1
80°	122.6	152.7	218.5	261.1	280.6
82.5°	83.5	113.7	163.4	195.4	206.0
85°	49.7	71.0	104.8	122.6	120.8
87.5°	23.1	30.2	42.6	42.6	40.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)