

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: P312853

Luminaire Tested: **22FCZ2-39HE-UNV-L83050-CP125-W2A-U-4500K**

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: P312853
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-4500K
Description: 2'X2' TROFFER LED MODULE, RIBBED LENS, 0.125" POLYCARB SHEET
Light Source: (168) 4500K 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: 3674.0 lumens
Efficiency: N/A
Efficacy: 108.1 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

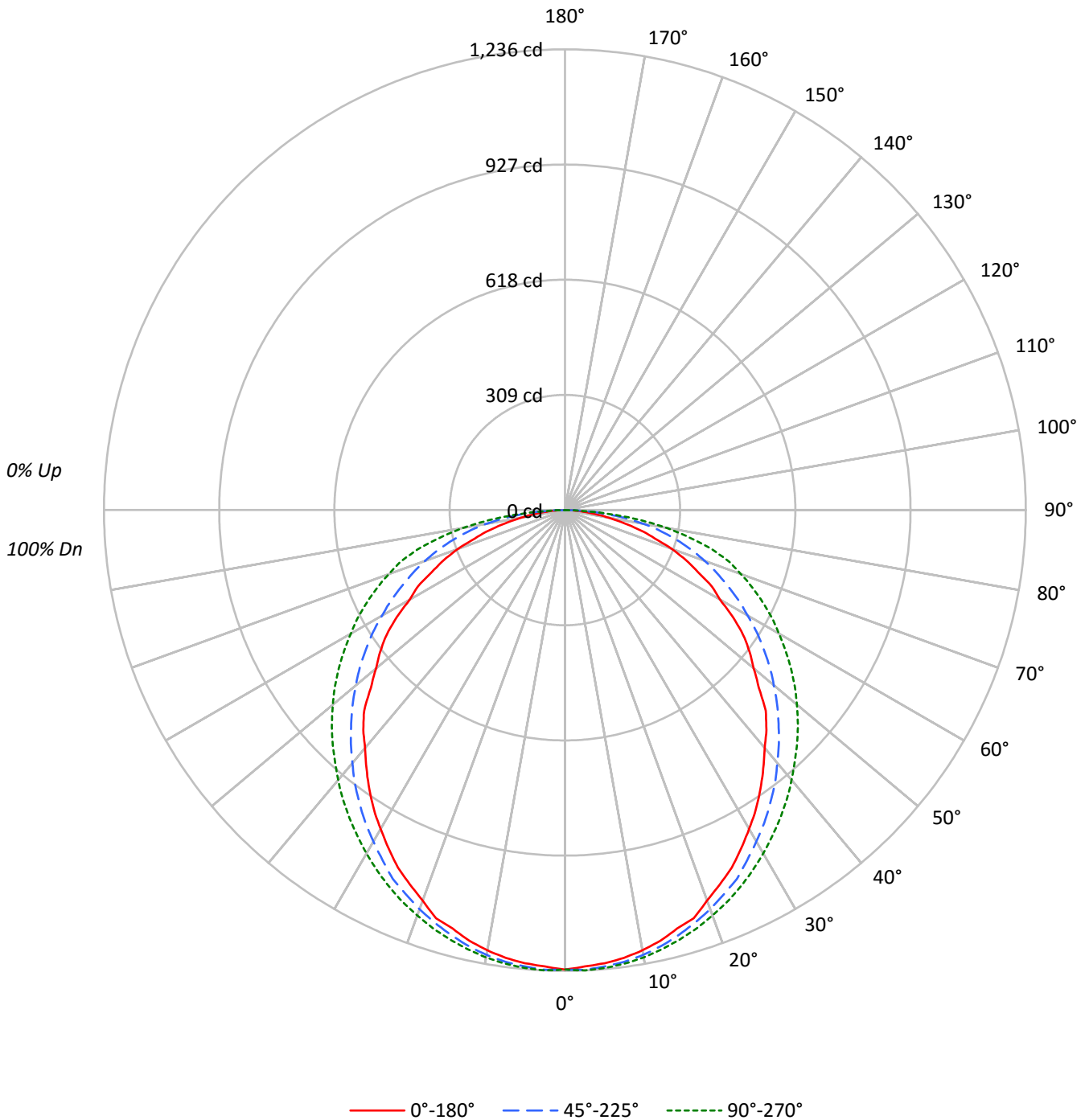
Input Watts (W): 34
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	3317	3317	3317
5°	3296	3320	3330
10°	3277	3311	3330
15°	3238	3287	3321
20°	3192	3263	3313
25°	3143	3242	3310
30°	3071	3191	3306
35°	3004	3154	3310
40°	2928	3113	3323
45°	2898	3085	3353
50°	2768	3062	3401
55°	2739	3052	3473
60°	2584	3047	3568
65°	2508	3068	3729
70°	2408	3141	3957
75°	2194	3236	4260
80°	1880	3352	4305
85°	1519	3202	3693



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	116.6	3.2
10°-20°	332.7	9.1
20°-30°	500.8	13.6
30°-40°	601.1	16.4
40°-50°	628.2	17.1
50°-60°	585.4	15.9
60°-70°	480.2	13.1
70°-80°	323.6	8.8
80°-90°	105.4	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°	950.2	25.9
0°-40°	1551.2	42.2
0°-60°	2764.9	75.3
0°-90°	3674.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3674.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1233	1233	1233	1233	1233	
5°	1220	1224	1229	1231	1233	116
15°	1162	1169	1180	1190	1192	328
25°	1059	1066	1092	1108	1115	487
35°	914	927	960	994	1008	572
45°	761	767	811	860	881	582
55°	584	594	651	712	740	517
65°	394	412	482	552	586	392
75°	211	234	311	382	410	222
85°	49	70	104	121	120	59
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1232.7	1232.7	1232.7	1232.7	1232.7
2.5°	1225.6	1229.1	1234.4	1236.2	1236.2
5°	1220.3	1223.9	1229.1	1230.9	1232.7
7.5°	1211.6	1215.1	1222.1	1225.6	1227.4
10°	1199.2	1202.8	1211.6	1216.8	1218.6
12.5°	1183.4	1186.9	1197.5	1204.5	1206.3
15°	1162.3	1169.4	1179.9	1190.5	1192.2
17.5°	1148.3	1146.5	1160.6	1172.9	1176.4
20°	1114.8	1123.6	1139.5	1153.5	1157.0
22.5°	1086.7	1093.7	1114.8	1130.7	1137.7
25°	1058.6	1065.6	1092.0	1107.8	1114.8
27.5°	1023.4	1034.0	1058.6	1081.4	1090.2
30°	988.2	998.8	1026.9	1053.3	1063.8
32.5°	953.1	965.4	995.3	1023.4	1035.7
35°	914.4	926.7	960.1	993.5	1007.6
37.5°	873.9	889.8	924.9	961.9	977.7
40°	833.5	849.3	886.2	928.5	946.0
42.5°	800.1	807.1	849.3	895.0	912.6
45°	761.4	766.7	810.6	859.9	881.0
47.5°	705.1	724.5	771.9	826.5	847.6
50°	661.2	682.3	731.5	789.5	812.4
52.5°	624.2	638.3	692.8	750.8	777.2
55°	583.8	594.3	650.6	712.2	740.3
57.5°	534.6	553.9	610.2	673.5	701.6
60°	480.1	504.7	566.2	634.8	662.9
62.5°	444.9	458.9	525.8	594.3	626.0
65°	393.9	411.5	481.8	552.1	585.6
67.5°	351.7	369.3	441.4	511.7	545.1
70°	306.0	323.6	399.2	469.5	502.9
72.5°	253.2	277.8	357.0	427.3	462.5
75°	211.0	233.9	311.2	381.6	409.7
77.5°	163.5	193.4	265.5	323.6	344.7
80°	121.3	151.2	216.3	258.5	277.8
82.5°	82.6	112.5	161.8	193.4	204.0
85°	49.2	70.3	103.7	121.3	119.6
87.5°	22.9	29.9	42.2	42.2	40.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)