

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: P312978

Luminaire Tested: **22FCZ2-34HE-UNV-L83050-S-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: P312978
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-23)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 22FCZ2-34HE-UNV-L83050-S-CP125-W2A-U-4500K
Description: 2'X2' TROFFER LED MODULE, SMOOTH 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: 3380.0 lumens
Efficiency: N/A
Efficacy: 116.6 lumens/watt
Spacing Criteria (0/90/45): 1.18 / 1.26 / 1.34
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

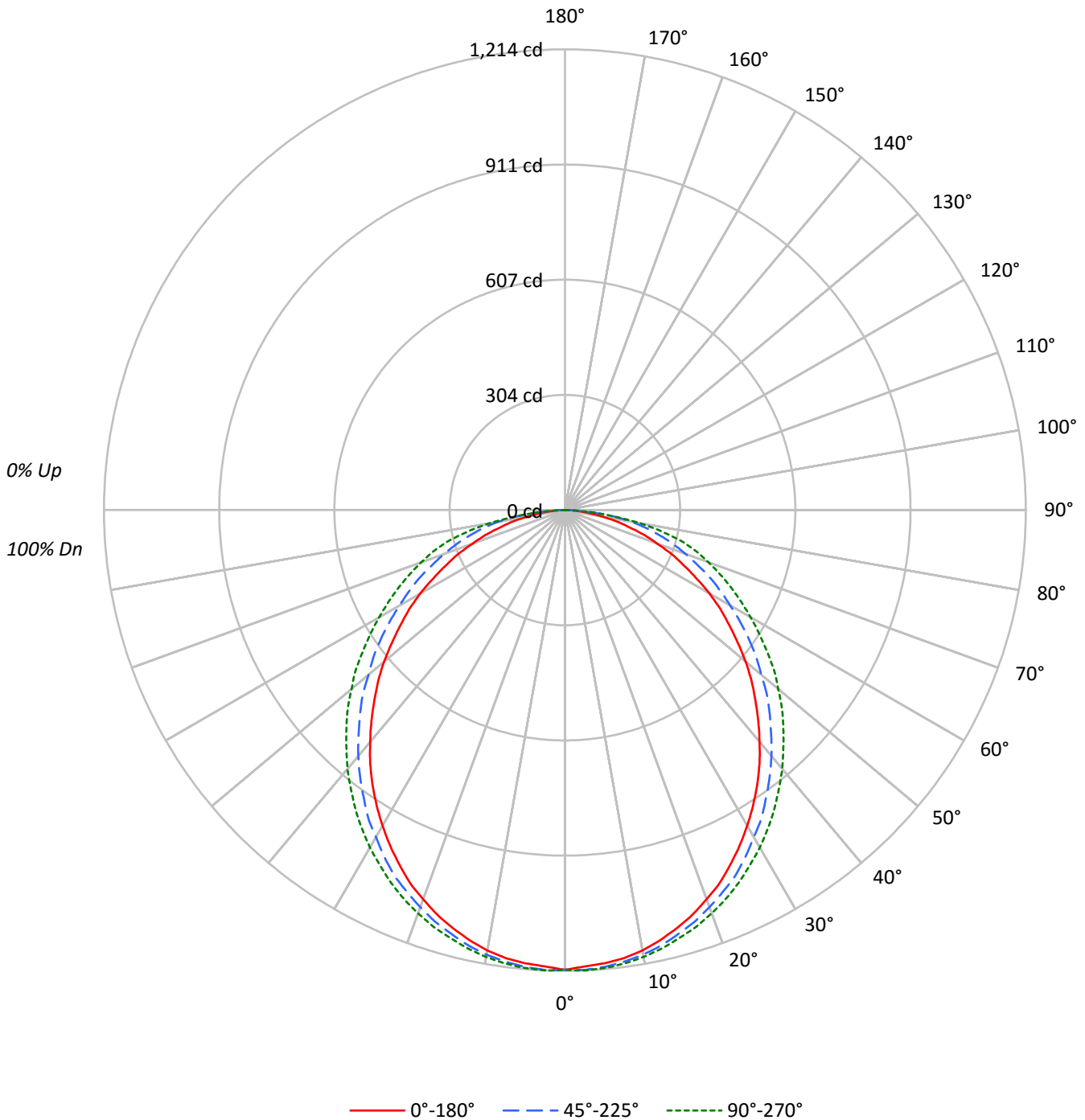
Input Watts (W): 29
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	99	95	106	101	97	94	97	94	91	93	90	88	89	87	85	83
2	98	90	83	77	96	88	82	76	84	79	74	81	77	73	78	74	71	69
3	90	79	71	64	87	77	70	63	74	68	62	72	66	61	69	64	60	58
4	82	70	61	54	80	69	60	54	66	59	53	64	57	52	61	56	52	49
5	75	62	53	47	73	61	53	46	59	52	46	57	51	45	55	50	45	43
6	70	56	47	41	68	55	47	41	53	46	40	52	45	40	50	44	39	37
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	33
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	31	30
9	56	43	35	29	55	42	34	29	41	34	29	40	33	29	39	33	28	27
10	53	40	32	26	51	39	31	26	38	31	26	37	31	26	36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3259	3259	3259
5°	3237	3263	3272
10°	3219	3249	3266
15°	3176	3221	3251
20°	3125	3188	3238
25°	3062	3156	3217
30°	2984	3092	3190
35°	2901	3036	3160
40°	2803	2975	3130
45°	2701	2905	3097
50°	2601	2826	3070
55°	2479	2775	3048
60°	2368	2708	3039
65°	2209	2691	3073
70°	2035	2668	3164
75°	1836	2705	3328
80°	1588	2786	3129
85°	1315	2337	2337



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	114.5	3.4
10°-20°	326.0	9.6
20°-30°	487.7	14.4
30°-40°	577.6	17.1
40°-50°	588.6	17.4
50°-60°	527.6	15.6
60°-70°	413.0	12.2
70°-80°	266.3	7.9
80°-90°	78.7	2.3
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°	928.2	27.5
0°-40°	1505.8	44.5
0°-60°	2621.9	77.6
0°-90°	3380.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3380.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1211	1211	1211	1211	1211	
5°	1198	1202	1208	1210	1211	114
15°	1140	1146	1156	1165	1167	321
25°	1031	1041	1063	1077	1083	475
35°	883	894	924	952	962	552
45°	710	725	763	803	814	548
55°	528	546	591	632	650	474
65°	347	367	423	464	483	345
75°	177	203	260	304	320	189
85°	43	58	76	76	76	50
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1211.2	1211.2	1211.2	1211.2	1211.2
2.5°	1203.3	1206.4	1212.7	1214.3	1214.3
5°	1198.5	1201.7	1208.0	1209.6	1211.2
7.5°	1190.7	1192.2	1200.1	1203.3	1204.9
10°	1178.0	1181.2	1189.1	1193.8	1195.4
12.5°	1160.7	1165.4	1174.9	1181.2	1182.8
15°	1140.2	1146.5	1156.0	1165.4	1167.0
17.5°	1118.1	1124.4	1137.0	1148.1	1151.2
20°	1091.3	1099.2	1113.4	1126.0	1130.7
22.5°	1064.5	1070.8	1088.2	1103.9	1108.7
25°	1031.4	1040.8	1062.9	1077.1	1083.4
27.5°	996.7	1007.7	1029.8	1048.7	1055.0
30°	960.4	971.5	995.1	1018.8	1026.6
32.5°	922.6	935.2	963.6	987.2	995.1
35°	883.1	894.2	924.1	952.5	962.0
37.5°	842.1	851.6	886.3	916.3	925.7
40°	798.0	810.6	846.9	881.6	891.0
42.5°	753.8	768.0	804.3	842.1	851.6
45°	709.7	725.4	763.3	802.7	813.7
47.5°	667.1	679.7	722.3	760.1	775.9
50°	621.3	634.0	675.0	717.5	733.3
52.5°	574.0	591.4	635.5	676.5	695.5
55°	528.3	545.7	591.4	632.4	649.7
57.5°	485.7	499.9	547.2	589.8	607.2
60°	440.0	452.6	503.1	548.8	564.6
62.5°	391.1	410.0	462.1	504.6	523.6
65°	346.9	367.4	422.6	463.6	482.6
67.5°	305.9	324.9	378.5	422.6	443.1
70°	258.6	283.9	339.1	383.2	402.1
72.5°	220.8	242.9	299.6	343.8	364.3
75°	176.6	203.4	260.2	304.4	320.1
77.5°	140.4	167.2	220.8	255.5	263.4
80°	102.5	129.3	179.8	197.1	201.9
82.5°	69.4	94.6	129.3	134.0	135.6
85°	42.6	58.4	75.7	75.7	75.7
87.5°	20.5	23.7	26.8	25.2	25.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)