

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: P313013

Luminaire Tested: **22FCZ2-39HE-UNV-L83050-S-CP250-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: P313013
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: 22FCZ2-39HE-UNV-L83050-S-CP250-W2A-U-4500K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS, 0.250" 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: 3680.0 lumens
Efficiency: N/A
Efficacy: 108.2 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

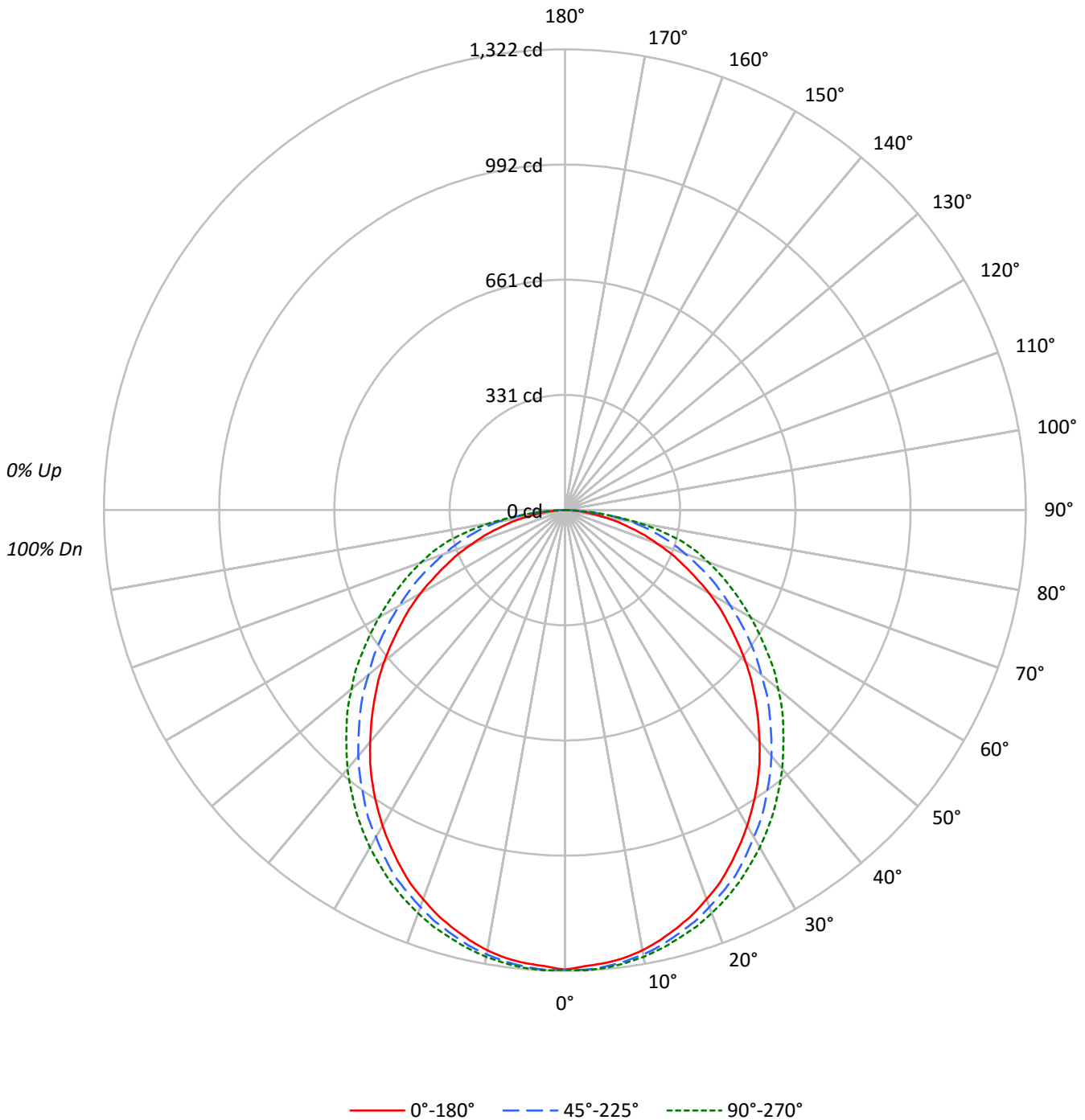
Input Watts (W): 34
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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					100			
1	108	103	99	95	106	101	97	94	97	94	91	93	90	88	89	87	85	83					83			
2	98	90	83	77	96	88	82	76	84	79	74	81	77	73	78	74	71	69					69			
3	90	79	71	64	87	77	70	63	74	68	62	72	66	61	69	64	60	58					58			
4	82	70	61	54	80	69	60	54	66	59	53	64	57	52	61	56	52	49					49			
5	75	62	53	47	73	61	53	46	59	52	46	57	51	45	55	50	45	43					43			
6	70	56	47	41	68	55	47	41	53	46	40	52	45	40	50	44	39	37					37			
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	33					33			
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	31	30					30			
9	56	43	35	29	55	42	34	29	41	34	29	40	33	29	39	33	28	27					27			
10	53	40	32	26	51	39	31	26	38	31	26	37	31	26	36	30	26	24					24			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3549	3549	3549
5°	3525	3553	3562
10°	3505	3537	3556
15°	3458	3506	3540
20°	3403	3471	3525
25°	3334	3436	3502
30°	3249	3366	3473
35°	3159	3305	3441
40°	3052	3239	3408
45°	2941	3162	3372
50°	2832	3077	3342
55°	2699	3021	3319
60°	2578	2948	3308
65°	2405	2930	3345
70°	2216	2905	3445
75°	1999	2946	3624
80°	1729	3033	3406
85°	1433	2544	2544



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	124.7	3.4
10°-20°	354.9	9.6
20°-30°	531.0	14.4
30°-40°	628.8	17.1
40°-50°	640.9	17.4
50°-60°	574.4	15.6
60°-70°	449.7	12.2
70°-80°	290.0	7.9
80°-90°	85.7	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°	1010.6	27.5
0°-40°	1639.4	44.5
0°-60°	2854.7	77.6
0°-90°	3680.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3680.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1319	1319	1319	1319	1319	
5°	1305	1308	1315	1317	1319	124
15°	1241	1248	1259	1269	1271	350
25°	1123	1133	1157	1173	1180	517
35°	962	974	1006	1037	1047	601
45°	773	790	831	874	886	597
55°	575	594	644	688	707	516
65°	378	400	460	505	525	375
75°	192	222	283	331	349	206
85°	46	64	82	82	82	54
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1318.7	1318.7	1318.7	1318.7	1318.7
2.5°	1310.1	1313.5	1320.4	1322.1	1322.1
5°	1304.9	1308.4	1315.2	1316.9	1318.7
7.5°	1296.3	1298.1	1306.6	1310.1	1311.8
10°	1282.6	1286.0	1294.6	1299.8	1301.5
12.5°	1263.7	1268.9	1279.2	1286.0	1287.8
15°	1241.4	1248.3	1258.6	1268.9	1270.6
17.5°	1217.4	1224.2	1238.0	1250.0	1253.4
20°	1188.2	1196.8	1212.2	1225.9	1231.1
22.5°	1159.0	1165.8	1184.7	1201.9	1207.1
25°	1122.9	1133.2	1157.3	1172.7	1179.6
27.5°	1085.1	1097.2	1121.2	1141.8	1148.7
30°	1045.7	1057.7	1083.4	1109.2	1117.8
32.5°	1004.4	1018.2	1049.1	1074.8	1083.4
35°	961.5	973.5	1006.2	1037.1	1047.4
37.5°	916.9	927.2	965.0	997.6	1007.9
40°	868.8	882.5	922.0	959.8	970.1
42.5°	820.7	836.2	875.7	916.9	927.2
45°	772.7	789.8	831.0	874.0	886.0
47.5°	726.3	740.0	786.4	827.6	844.8
50°	676.5	690.2	734.9	781.2	798.4
52.5°	625.0	643.9	692.0	736.6	757.2
55°	575.2	594.1	643.9	688.5	707.4
57.5°	528.8	544.3	595.8	642.2	661.0
60°	479.0	492.8	547.7	597.5	614.7
62.5°	425.8	446.4	503.1	549.4	570.0
65°	377.7	400.1	460.2	504.8	525.4
67.5°	333.1	353.7	412.1	460.2	482.5
70°	281.6	309.1	369.2	417.2	437.8
72.5°	240.4	264.4	326.2	374.3	396.6
75°	192.3	221.5	283.3	331.4	348.6
77.5°	152.8	182.0	240.4	278.2	286.7
80°	111.6	140.8	195.7	214.6	219.8
82.5°	75.5	103.0	140.8	145.9	147.7
85°	46.4	63.5	82.4	82.4	82.4
87.5°	22.3	25.8	29.2	27.5	27.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)