

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: P309090

Luminaire Tested: **22FCZ2-39HE-UNV-L82765-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: P309090
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-L82765-S-CP250-W2A-U-4500K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS, 0.250" POLYCARB 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: 3526.0 lumens
Efficiency: N/A
Efficacy: 106.8 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

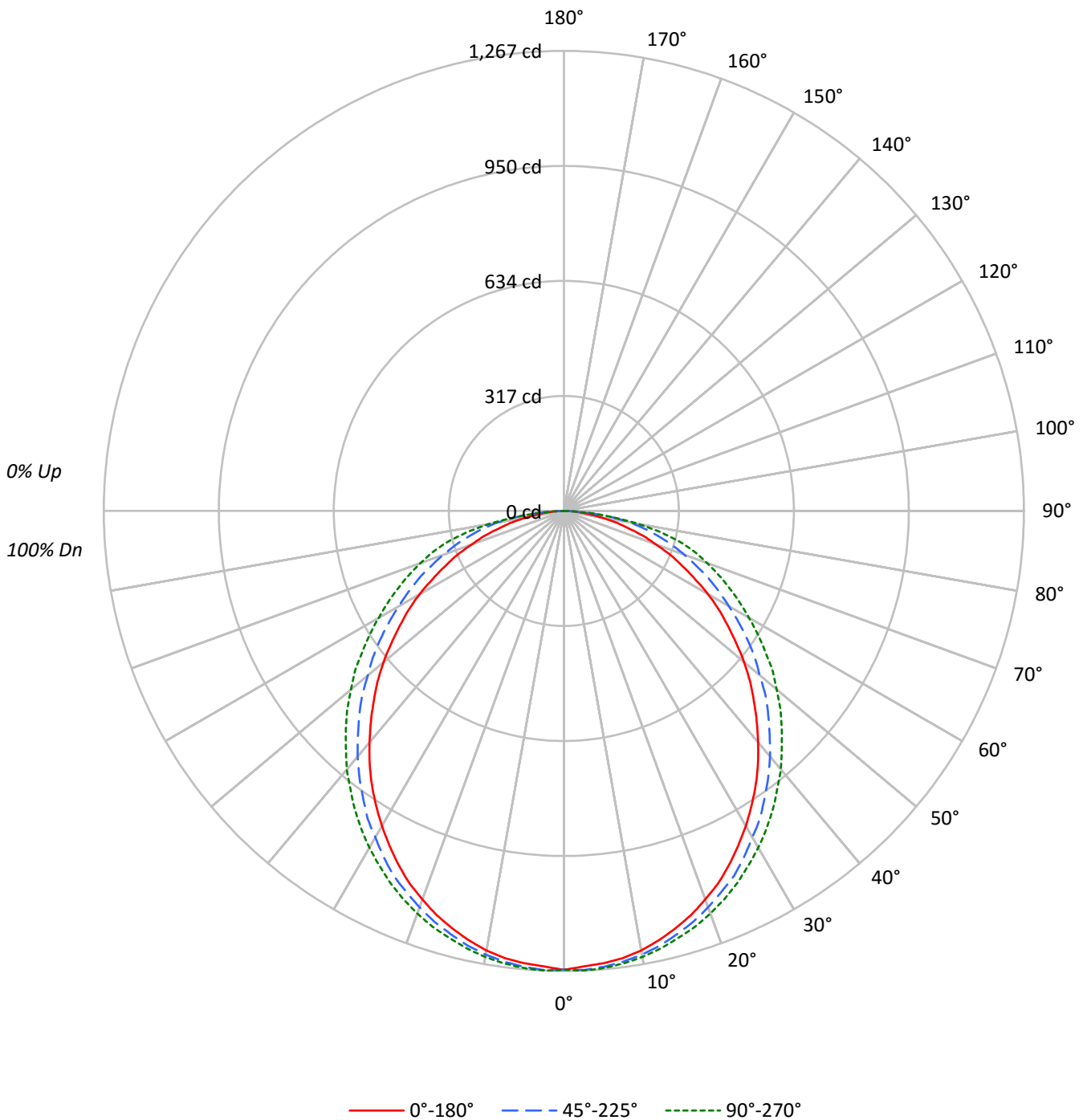
Input Watts (W): 33
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	3400	3400	3400
5°	3377	3404	3413
10°	3358	3389	3407
15°	3314	3360	3392
20°	3260	3326	3378
25°	3195	3292	3356
30°	3113	3226	3328
35°	3027	3167	3297
40°	2924	3103	3265
45°	2817	3030	3231
50°	2714	2948	3203
55°	2586	2894	3180
60°	2470	2824	3170
65°	2304	2807	3205
70°	2123	2783	3301
75°	1916	2822	3473
80°	1657	2906	3264
85°	1371	2439	2439



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	119.5	3.4
10°-20°	340.0	9.6
20°-30°	508.8	14.4
30°-40°	602.5	17.1
40°-50°	614.0	17.4
50°-60°	550.3	15.6
60°-70°	430.9	12.2
70°-80°	277.8	7.9
80°-90°	82.1	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°	968.3	27.5
0°-40°	1570.8	44.5
0°-60°	2735.2	77.6
0°-90°	3526.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3526.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1264	1264	1264	1264	1264	
5°	1250	1254	1260	1262	1264	119
15°	1189	1196	1206	1216	1217	335
25°	1076	1086	1109	1124	1130	495
35°	921	933	964	994	1004	576
45°	740	757	796	837	849	572
55°	551	569	617	660	678	494
65°	362	383	441	484	503	360
75°	184	212	271	318	334	198
85°	44	61	79	79	79	52
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1263.5	1263.5	1263.5	1263.5	1263.5
2.5°	1255.2	1258.5	1265.1	1266.8	1266.8
5°	1250.3	1253.6	1260.2	1261.8	1263.5
7.5°	1242.1	1243.7	1252.0	1255.2	1256.9
10°	1228.9	1232.2	1240.4	1245.4	1247.0
12.5°	1210.8	1215.8	1225.6	1232.2	1233.9
15°	1189.4	1196.0	1205.9	1215.8	1217.4
17.5°	1166.4	1173.0	1186.2	1197.7	1201.0
20°	1138.4	1146.7	1161.5	1174.6	1179.6
22.5°	1110.5	1117.1	1135.2	1151.6	1156.5
25°	1075.9	1085.8	1108.8	1123.6	1130.2
27.5°	1039.7	1051.3	1074.3	1094.0	1100.6
30°	1001.9	1013.4	1038.1	1062.8	1071.0
32.5°	962.4	975.6	1005.2	1029.9	1038.1
35°	921.3	932.8	964.1	993.7	1003.5
37.5°	878.5	888.4	924.6	955.8	965.7
40°	832.4	845.6	883.4	919.6	929.5
42.5°	786.4	801.2	839.0	878.5	888.4
45°	740.3	756.8	796.3	837.4	848.9
47.5°	695.9	709.1	753.5	793.0	809.4
50°	648.2	661.4	704.1	748.5	765.0
52.5°	598.8	616.9	663.0	705.8	725.5
55°	551.1	569.2	616.9	659.7	677.8
57.5°	506.7	521.5	570.9	615.3	633.4
60°	459.0	472.2	524.8	572.5	589.0
62.5°	408.0	427.7	482.0	526.4	546.2
65°	361.9	383.3	440.9	483.7	503.4
67.5°	319.2	338.9	394.8	440.9	462.3
70°	269.8	296.1	353.7	399.8	419.5
72.5°	230.3	253.4	312.6	358.6	380.0
75°	184.3	212.2	271.4	317.5	334.0
77.5°	146.4	174.4	230.3	266.5	274.7
80°	106.9	134.9	187.5	205.6	210.6
82.5°	72.4	98.7	134.9	139.8	141.5
85°	44.4	60.9	79.0	79.0	79.0
87.5°	21.4	24.7	28.0	26.3	26.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)