

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: P313007

Luminaire Tested: **22FCZ2-39HE-UNV-L83050-S-CP187-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: P313007
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-CP187-W2A-U-4000K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS, 0.187" POLYCARB 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: 3675.0 lumens
Efficiency: N/A
Efficacy: 111.0 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

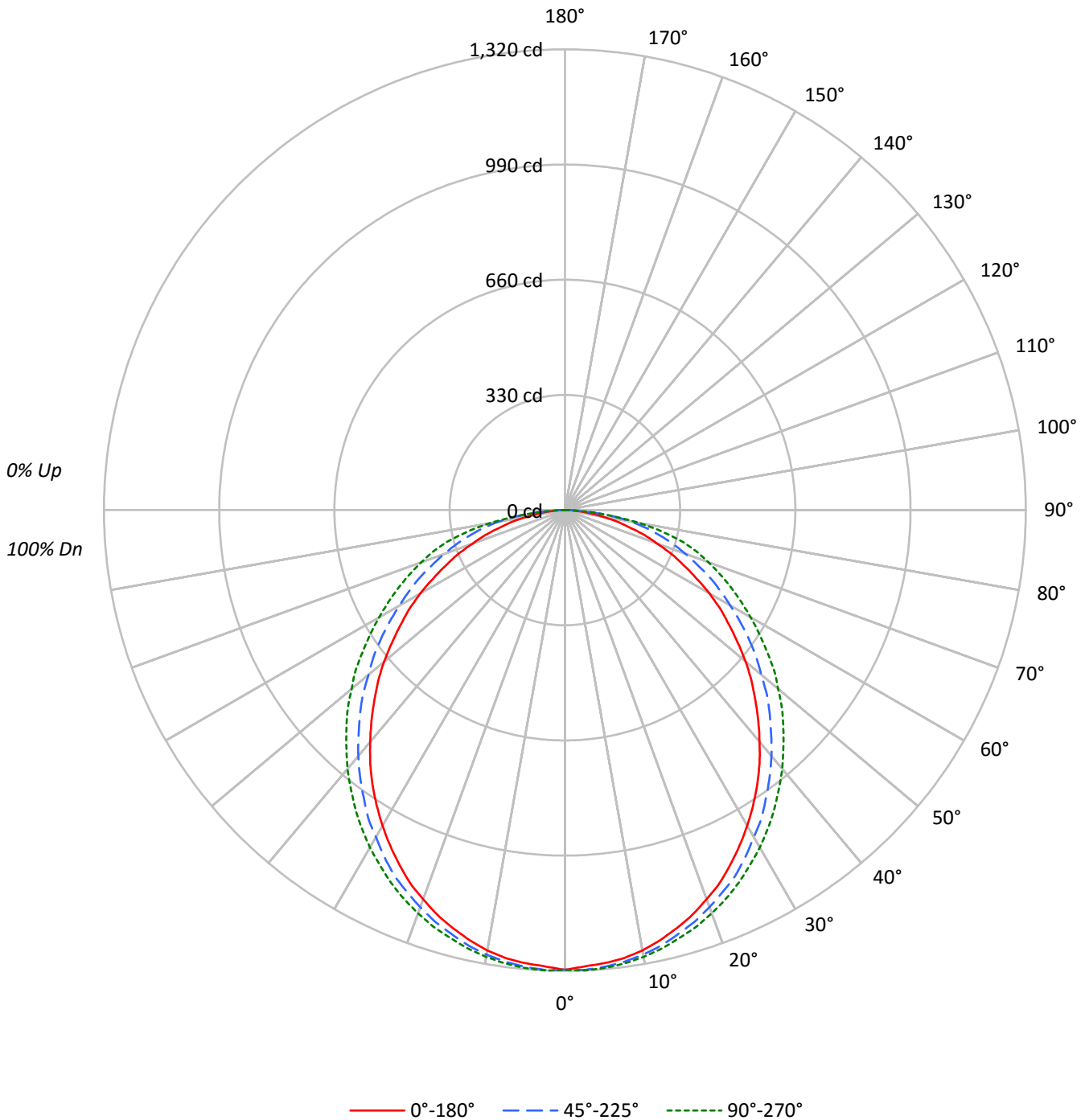
Input Watts (W): 33.1
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	3544	3544	3544
5°	3520	3548	3557
10°	3500	3533	3551
15°	3454	3502	3535
20°	3398	3467	3521
25°	3330	3431	3498
30°	3245	3362	3469
35°	3154	3301	3436
40°	3048	3235	3403
45°	2936	3158	3367
50°	2828	3072	3338
55°	2695	3017	3314
60°	2575	2944	3304
65°	2402	2926	3341
70°	2212	2901	3440
75°	1996	2941	3619
80°	1728	3030	3402
85°	1430	2541	2541



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	124.5	3.4
10°-20°	354.4	9.6
20°-30°	530.3	14.4
30°-40°	628.0	17.1
40°-50°	640.0	17.4
50°-60°	573.6	15.6
60°-70°	449.1	12.2
70°-80°	289.6	7.9
80°-90°	85.5	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°	1009.2	27.5
0°-40°	1637.2	44.5
0°-60°	2850.8	77.6
0°-90°	3675.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3675.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1317	1317	1317	1317	1317	
5°	1303	1307	1313	1315	1317	124
15°	1240	1247	1257	1267	1269	350
25°	1121	1132	1156	1171	1178	516
35°	960	972	1005	1036	1046	600
45°	772	789	830	873	885	596
55°	574	593	643	688	706	515
65°	377	400	460	504	525	375
75°	192	221	283	331	348	206
85°	46	63	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°	1316.9	1316.9	1316.9	1316.9	1316.9
2.5°	1308.3	1311.7	1318.6	1320.3	1320.3
5°	1303.1	1306.6	1313.4	1315.2	1316.9
7.5°	1294.6	1296.3	1304.9	1308.3	1310.0
10°	1280.9	1284.3	1292.9	1298.0	1299.7
12.5°	1262.0	1267.1	1277.4	1284.3	1286.0
15°	1239.7	1246.6	1256.9	1267.1	1268.9
17.5°	1215.7	1222.6	1236.3	1248.3	1251.7
20°	1186.6	1195.1	1210.6	1224.3	1229.4
22.5°	1157.4	1164.3	1183.1	1200.3	1205.4
25°	1121.4	1131.7	1155.7	1171.1	1178.0
27.5°	1083.7	1095.7	1119.7	1140.3	1147.1
30°	1044.2	1056.2	1082.0	1107.7	1116.3
32.5°	1003.1	1016.8	1047.7	1073.4	1082.0
35°	960.2	972.2	1004.8	1035.7	1045.9
37.5°	915.6	925.9	963.6	996.2	1006.5
40°	867.6	881.3	920.8	958.5	968.8
42.5°	819.6	835.0	874.5	915.6	925.9
45°	771.6	788.7	829.9	872.8	884.8
47.5°	725.3	739.0	785.3	826.5	843.6
50°	675.6	689.3	733.9	780.2	797.3
52.5°	624.1	643.0	691.0	735.6	756.2
55°	574.4	593.3	643.0	687.6	706.4
57.5°	528.1	543.6	595.0	641.3	660.1
60°	478.4	492.1	547.0	596.7	613.9
62.5°	425.2	445.8	502.4	548.7	569.3
65°	377.2	399.5	459.5	504.1	524.7
67.5°	332.6	353.2	411.5	459.5	481.8
70°	281.2	308.6	368.7	416.7	437.2
72.5°	240.1	264.1	325.8	373.8	396.1
75°	192.0	221.2	282.9	330.9	348.1
77.5°	152.6	181.8	240.1	277.8	286.4
80°	111.5	140.6	195.5	214.3	219.5
82.5°	75.4	102.9	140.6	145.7	147.5
85°	46.3	63.4	82.3	82.3	82.3
87.5°	22.3	25.7	29.1	27.4	27.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)