

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: P309051

Luminaire Tested: **22FCZ2-39HE-UNV-L82765-S-CA08-W2A-U-3000K**

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: P309051
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-CA08-W2A-U-3000K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS, 0.08" ACRYLIC 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: 3532.0 lumens
Efficiency: N/A
Efficacy: 109.7 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

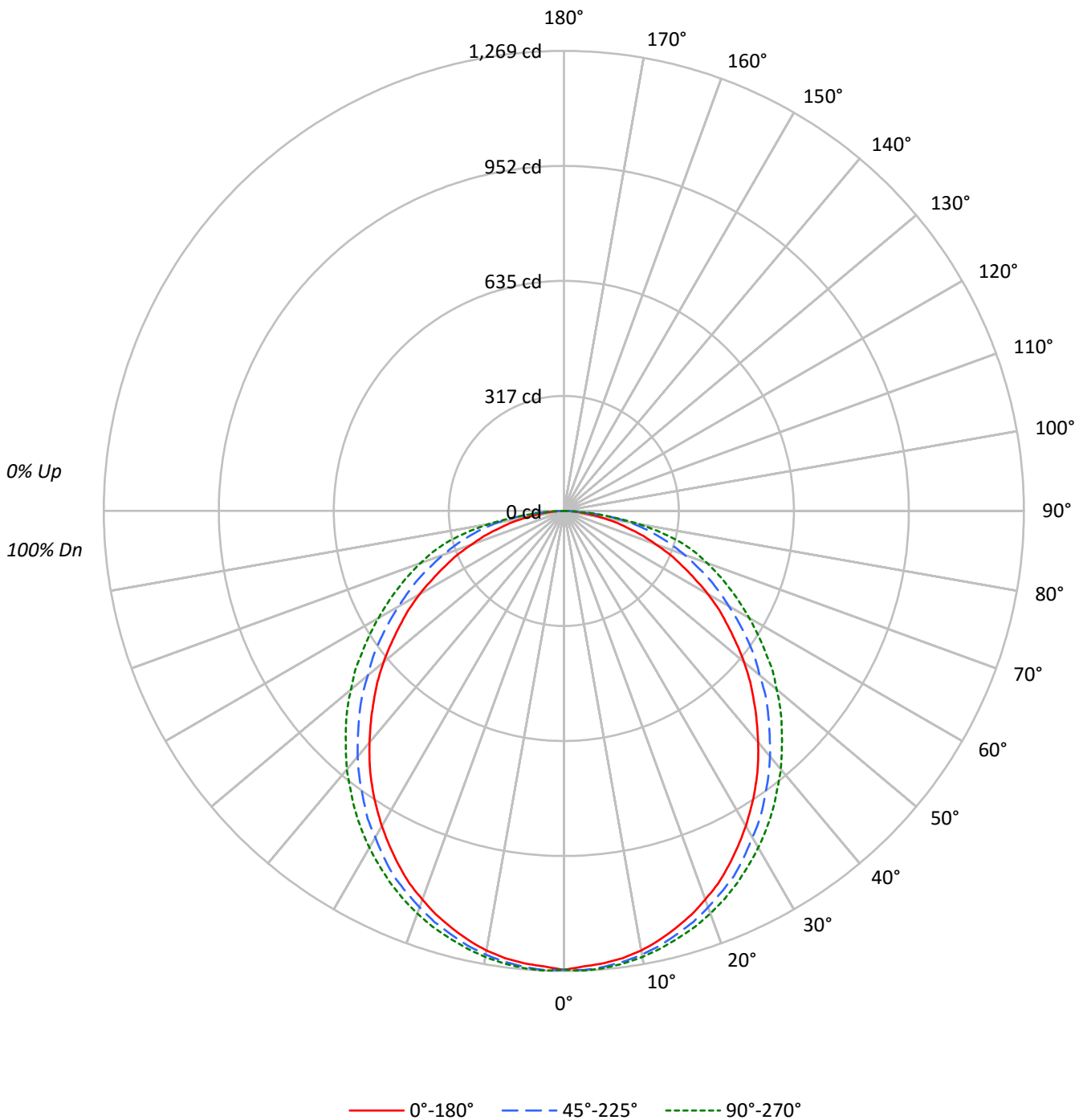
Input Watts (W): 32.2
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	3406	3406	3406
5°	3383	3410	3419
10°	3364	3395	3413
15°	3319	3365	3397
20°	3266	3332	3384
25°	3200	3298	3361
30°	3118	3231	3333
35°	3032	3172	3302
40°	2929	3108	3271
45°	2822	3035	3236
50°	2718	2953	3208
55°	2590	2899	3186
60°	2475	2829	3175
65°	2308	2812	3211
70°	2127	2788	3306
75°	1919	2827	3478
80°	1660	2912	3268
85°	1374	2442	2442



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	119.7	3.4
10°-20°	340.6	9.6
20°-30°	509.6	14.4
30°-40°	603.5	17.1
40°-50°	615.1	17.4
50°-60°	551.3	15.6
60°-70°	431.6	12.2
70°-80°	278.3	7.9
80°-90°	82.2	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°	969.9	27.5
0°-40°	1573.5	44.5
0°-60°	2739.9	77.6
0°-90°	3532.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3532.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1266	1266	1266	1266	1266	
5°	1252	1256	1262	1264	1266	119
15°	1192	1198	1208	1218	1220	336
25°	1078	1088	1111	1126	1132	496
35°	923	934	966	995	1005	577
45°	742	758	798	839	850	573
55°	552	570	618	661	679	495
65°	362	384	442	484	504	360
75°	185	213	272	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°	1265.6	1265.6	1265.6	1265.6	1265.6
2.5°	1257.4	1260.7	1267.3	1268.9	1268.9
5°	1252.4	1255.7	1262.3	1264.0	1265.6
7.5°	1244.2	1245.9	1254.1	1257.4	1259.0
10°	1231.0	1234.3	1242.6	1247.5	1249.1
12.5°	1212.9	1217.8	1227.7	1234.3	1236.0
15°	1191.5	1198.1	1207.9	1217.8	1219.5
17.5°	1168.4	1175.0	1188.2	1199.7	1203.0
20°	1140.4	1148.6	1163.5	1176.6	1181.6
22.5°	1112.4	1119.0	1137.1	1153.6	1158.5
25°	1077.8	1087.6	1110.7	1125.5	1132.1
27.5°	1041.5	1053.0	1076.1	1095.9	1102.5
30°	1003.6	1015.1	1039.9	1064.6	1072.8
32.5°	964.1	977.2	1006.9	1031.6	1039.9
35°	922.9	934.4	965.7	995.4	1005.2
37.5°	880.0	889.9	926.1	957.5	967.3
40°	833.9	847.0	884.9	921.2	931.1
42.5°	787.7	802.6	840.5	880.0	889.9
45°	741.6	758.1	797.6	838.8	850.3
47.5°	697.1	710.3	754.8	794.3	810.8
50°	649.3	662.5	705.3	749.8	766.3
52.5°	599.9	618.0	664.1	707.0	726.7
55°	552.1	570.2	618.0	660.8	679.0
57.5°	507.6	522.4	571.8	616.3	634.5
60°	459.8	473.0	525.7	573.5	590.0
62.5°	408.7	428.5	482.8	527.3	547.1
65°	362.5	384.0	441.7	484.5	504.3
67.5°	319.7	339.5	395.5	441.7	463.1
70°	270.3	296.6	354.3	400.5	420.2
72.5°	230.7	253.8	313.1	359.3	380.7
75°	184.6	212.6	271.9	318.1	334.5
77.5°	146.7	174.7	230.7	267.0	275.2
80°	107.1	135.1	187.9	206.0	210.9
82.5°	72.5	98.9	135.1	140.1	141.7
85°	44.5	61.0	79.1	79.1	79.1
87.5°	21.4	24.7	28.0	26.4	26.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)