

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: P308855

Luminaire Tested: **22FCZ2-44HE-UNV-L82765-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: P308855
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-33)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 22FCZ2-44HE-UNV-L82765-CP187-W2A-U-4000K
Description: 2'X2' TROFFER LED MODULE, RIBBED LENS, 0.187" 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: 3717.0 lumens
Efficiency: N/A
Efficacy: 98.9 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.28 / 1.37
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

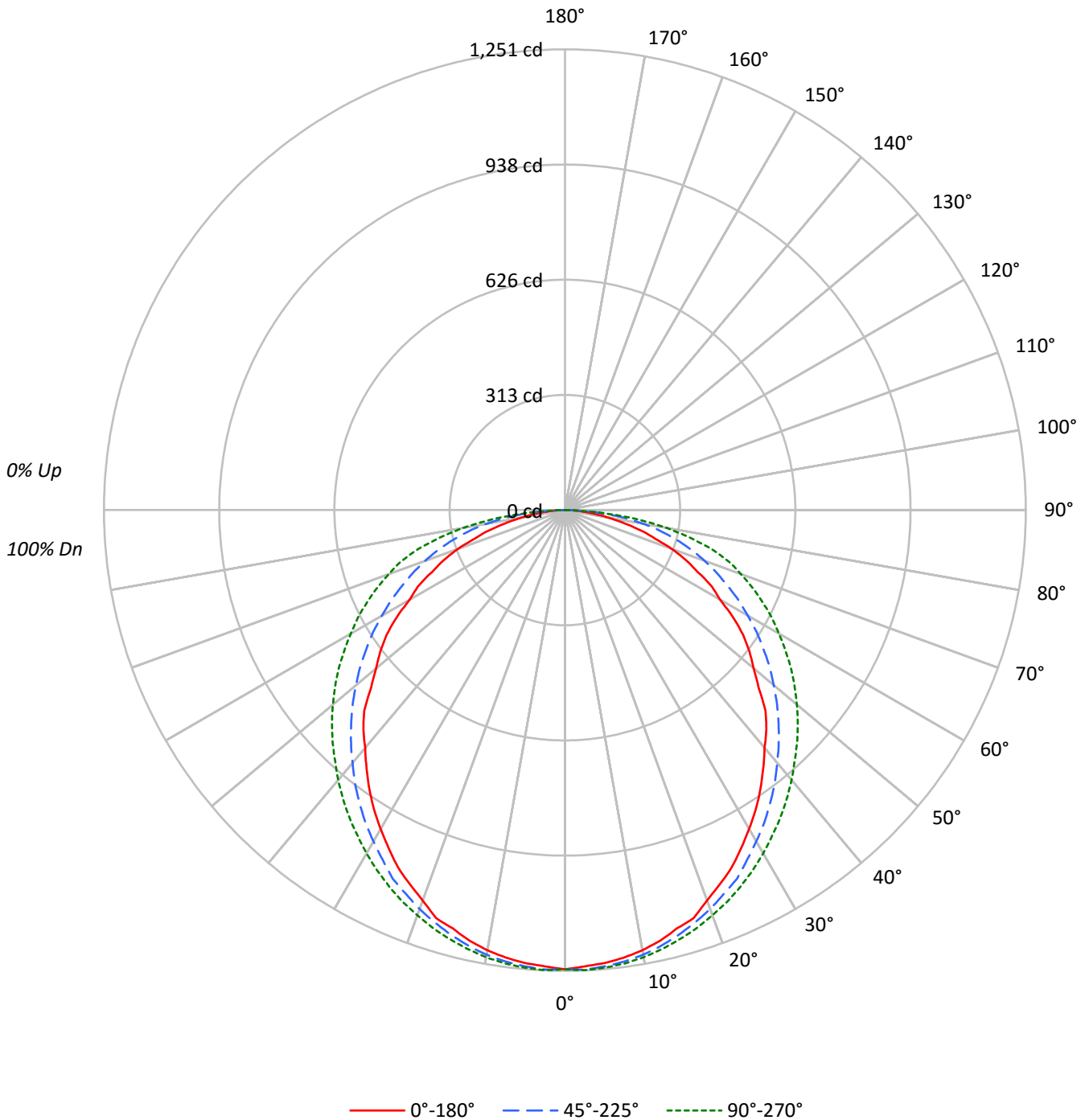
Input Watts (W): 37.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	98	94	105	100	96	92	96	93	90	92	89	87	89	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	59	56
4	81	69	60	53	79	67	59	52	65	57	51	62	56	51	60	55	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	39	51	44	38	49	43	38	36
7	64	50	41	35	62	49	40	34	47	40	34	46	39	34	45	38	34	32
8	59	45	37	31	58	45	36	31	43	36	30	42	35	30	41	35	30	28
9	55	42	33	28	54	41	33	28	40	33	27	39	32	27	38	32	27	25
10	52	38	30	25	51	38	30	25	37	30	25	36	29	25	35	29	25	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3356	3356	3356
5°	3335	3359	3369
10°	3315	3349	3369
15°	3276	3326	3360
20°	3230	3301	3352
25°	3180	3280	3349
30°	3107	3228	3344
35°	3039	3191	3349
40°	2962	3150	3362
45°	2931	3121	3392
50°	2800	3098	3441
55°	2771	3088	3514
60°	2614	3083	3610
65°	2537	3103	3772
70°	2435	3177	4003
75°	2220	3274	4310
80°	1903	3391	4356
85°	1538	3242	3736



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	118.0	3.2
10°-20°	336.6	9.1
20°-30°	506.7	13.6
30°-40°	608.1	16.4
40°-50°	635.6	17.1
50°-60°	592.3	15.9
60°-70°	485.8	13.1
70°-80°	327.3	8.8
80°-90°	106.6	2.9
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°	961.3	25.9
0°-40°	1569.4	42.2
0°-60°	2797.2	75.3
0°-90°	3717.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3717.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1247	1247	1247	1247	1247	
5°	1235	1238	1244	1245	1247	117
15°	1176	1183	1194	1204	1206	332
25°	1071	1078	1105	1121	1128	492
35°	925	938	971	1005	1019	578
45°	770	776	820	870	891	588
55°	591	601	658	720	749	523
65°	398	416	487	559	592	396
75°	214	237	315	386	414	224
85°	50	71	105	123	121	59
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1247.1	1247.1	1247.1	1247.1	1247.1
2.5°	1240.0	1243.5	1248.9	1250.6	1250.6
5°	1234.6	1238.2	1243.5	1245.3	1247.1
7.5°	1225.7	1229.3	1236.4	1240.0	1241.7
10°	1213.3	1216.8	1225.7	1231.1	1232.9
12.5°	1197.3	1200.8	1211.5	1218.6	1220.4
15°	1175.9	1183.0	1193.7	1204.4	1206.2
17.5°	1161.7	1159.9	1174.1	1186.6	1190.2
20°	1127.9	1136.8	1152.8	1167.0	1170.6
22.5°	1099.4	1106.5	1127.9	1143.9	1151.0
25°	1071.0	1078.1	1104.8	1120.8	1127.9
27.5°	1035.4	1046.1	1071.0	1094.1	1103.0
30°	999.8	1010.5	1038.9	1065.6	1076.3
32.5°	964.2	976.7	1006.9	1035.4	1047.8
35°	925.1	937.5	971.3	1005.1	1019.4
37.5°	884.2	900.2	935.8	973.1	989.1
40°	843.3	859.3	896.6	939.3	957.1
42.5°	809.4	816.6	859.3	905.5	923.3
45°	770.3	775.6	820.1	869.9	891.3
47.5°	713.4	733.0	781.0	836.1	857.5
50°	668.9	690.3	740.1	798.8	821.9
52.5°	631.5	645.8	700.9	759.6	786.3
55°	590.6	601.3	658.2	720.5	749.0
57.5°	540.8	560.4	617.3	681.4	709.8
60°	485.7	510.6	572.8	642.2	670.7
62.5°	450.1	464.3	531.9	601.3	633.3
65°	398.5	416.3	487.4	558.6	592.4
67.5°	355.8	373.6	446.5	517.7	551.5
70°	309.5	327.3	403.8	475.0	508.8
72.5°	256.2	281.1	361.1	432.3	467.9
75°	213.5	236.6	314.9	386.0	414.5
77.5°	165.4	195.7	268.6	327.3	348.7
80°	122.8	153.0	218.8	261.5	281.1
82.5°	83.6	113.9	163.7	195.7	206.4
85°	49.8	71.2	105.0	122.8	121.0
87.5°	23.1	30.2	42.7	42.7	40.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)