

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: P310617

Luminaire Tested: **24FCZ2-35HE-UNV-L82765-CP250-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: P310617
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-15)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24FCZ2-35HE-UNV-L82765-CP250-W2A-U-3000K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.250" POLYCARB SHEET
Light Source: (336) 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: 2819.0 lumens
Efficiency: N/A
Efficacy: 109.3 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.29 / 1.38
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

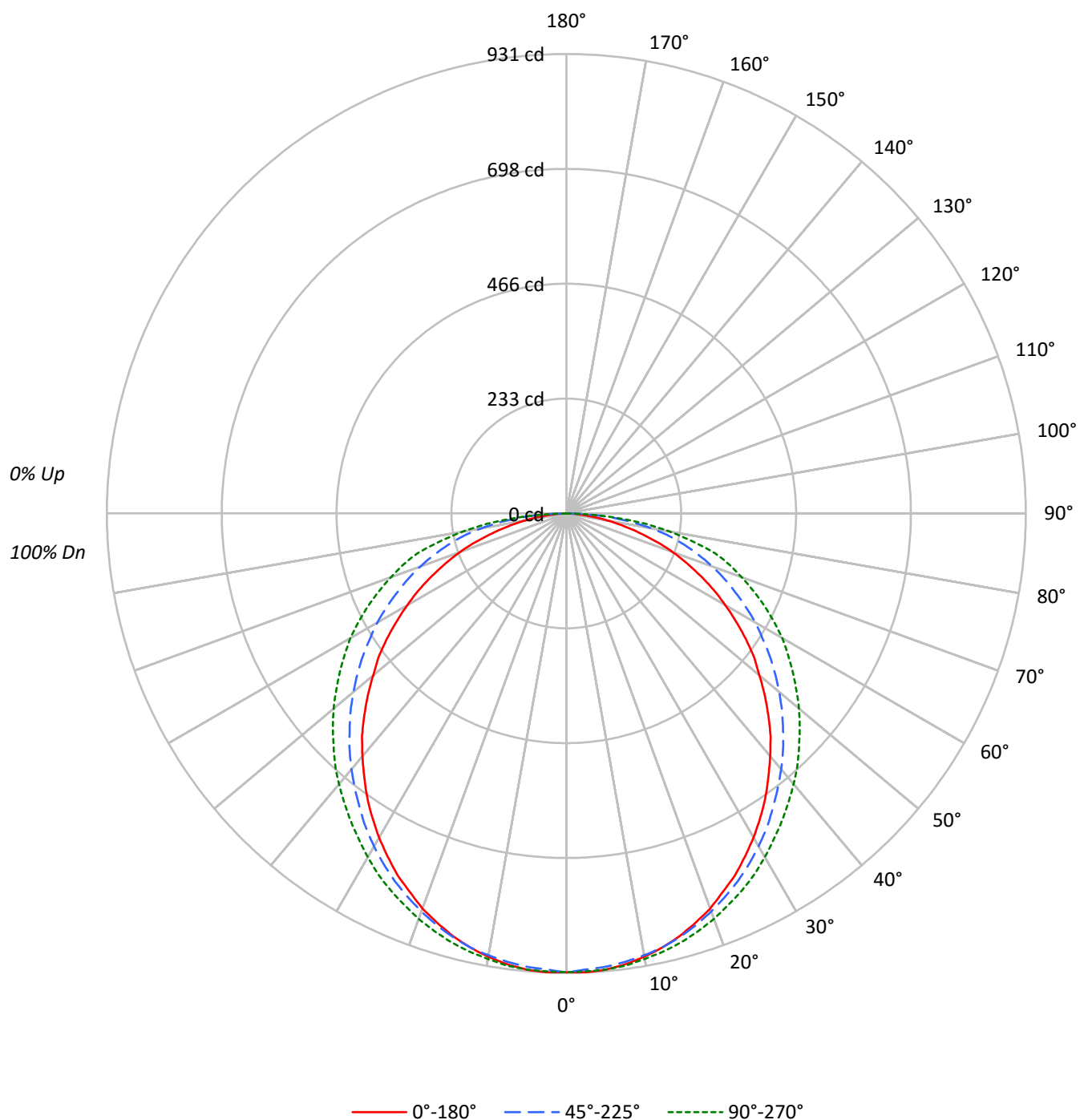
Input Watts (W): 25.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				0
RW	70	50	30	10	70	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		100
1	108	103	98	94	105	100	96	92	96	92	89		92	89	87		82
2	98	89	81	75	95	87	80	74	83	78	73		80	75	71		67
3	89	77	69	62	86	76	68	61	73	66	60		70	64	59		56
4	81	68	59	52	79	67	58	52	64	57	51		62	56	50		47
5	74	61	52	45	72	60	51	44	58	50	44		56	49	43		41
6	69	55	46	39	67	54	45	39	52	44	38		50	43	38		36
7	64	50	41	34	62	49	40	34	47	39	34		46	39	34		31
8	59	45	37	31	57	45	36	30	43	36	30		42	35	30		28
9	55	41	33	27	54	41	33	27	40	32	27		39	32	27		25
10	52	38	30	25	50	38	30	25	37	30	25		36	29	25		23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1251	1251	1251
5°	1253	1246	1253
10°	1246	1242	1252
15°	1235	1238	1253
20°	1220	1229	1252
25°	1201	1220	1251
30°	1178	1210	1250
35°	1155	1198	1250
40°	1128	1189	1258
45°	1102	1182	1269
50°	1069	1178	1288
55°	1042	1180	1314
60°	1002	1190	1359
65°	956	1203	1408
70°	905	1240	1487
75°	807	1293	1624
80°	689	1370	1660
85°	491	1357	1589



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	88.0	3.1
10°-20°	251.6	8.9
20°-30°	380.0	13.5
30°-40°	458.0	16.2
40°-50°	480.8	17.1
50°-60°	449.8	16.0
60°-70°	371.5	13.2
70°-80°	253.1	9.0
80°-90°	86.3	3.1
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°	719.5	25.5
0°-40°	1177.5	41.8
0°-60°	2108.1	74.8
0°-90°	2819.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2819.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	930	930	930	930	930	
5°	928	927	922	928	928	88
15°	887	888	888	898	900	250
25°	809	813	822	838	843	372
35°	703	711	730	754	761	440
45°	579	591	621	655	667	446
55°	444	462	503	544	560	397
65°	300	326	378	426	442	298
75°	155	191	249	296	312	166
85°	32	63	88	99	103	40
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	929.7	929.7	929.7	929.7	929.7
2.5°	930.6	929.7	925.0	929.7	928.7
5°	927.8	926.9	922.2	927.8	927.8
7.5°	921.3	921.3	916.6	923.1	924.1
10°	911.9	911.9	909.1	916.6	916.6
12.5°	900.7	900.7	900.7	908.2	909.1
15°	886.7	887.6	888.5	897.9	899.8
17.5°	869.8	871.7	874.5	885.7	887.6
20°	852.1	853.9	858.6	871.7	874.5
22.5°	829.6	834.3	840.8	855.8	858.6
25°	809.0	812.8	822.1	838.0	842.7
27.5°	783.8	789.4	801.5	818.4	824.9
30°	758.5	764.1	779.1	798.7	804.4
32.5°	731.4	739.8	755.7	776.3	782.8
35°	703.3	710.8	729.5	753.8	761.3
37.5°	672.5	682.8	703.3	729.5	738.9
40°	642.5	653.8	677.2	705.2	716.4
42.5°	612.6	623.8	650.0	681.8	693.1
45°	578.9	591.1	621.0	654.7	666.9
47.5°	545.3	560.2	593.0	628.5	641.6
50°	510.7	527.5	563.0	600.5	615.4
52.5°	479.8	495.7	533.1	573.3	587.4
55°	444.3	462.0	503.2	544.3	560.2
57.5°	407.8	427.4	471.4	516.3	532.2
60°	372.2	393.8	442.4	487.3	505.1
62.5°	337.6	359.2	409.7	456.4	474.2
65°	300.2	325.5	377.9	425.6	442.4
67.5°	264.7	291.8	347.0	393.8	410.6
70°	230.1	256.3	315.2	361.0	377.9
72.5°	192.7	222.6	281.5	329.2	347.0
75°	155.3	190.8	248.8	295.6	312.4
77.5°	120.7	157.1	215.1	253.5	261.9
80°	88.9	126.3	176.8	203.9	214.2
82.5°	57.1	94.5	134.7	154.3	162.7
85°	31.8	62.7	87.9	99.1	102.9
87.5°	13.1	27.1	35.5	40.2	40.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)