

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: P311255

Luminaire Tested: **24FCZ2-35HE-UNV-L82765-S-CA08-W2A-U-2700K**

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: P311255
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-1)
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-S-CA08-W2A-U-2700K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.08" ACRYLIC SHEET
Light Source: (336) 2700K 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: 3102.0 lumens
Efficiency: N/A
Efficacy: 119.3 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

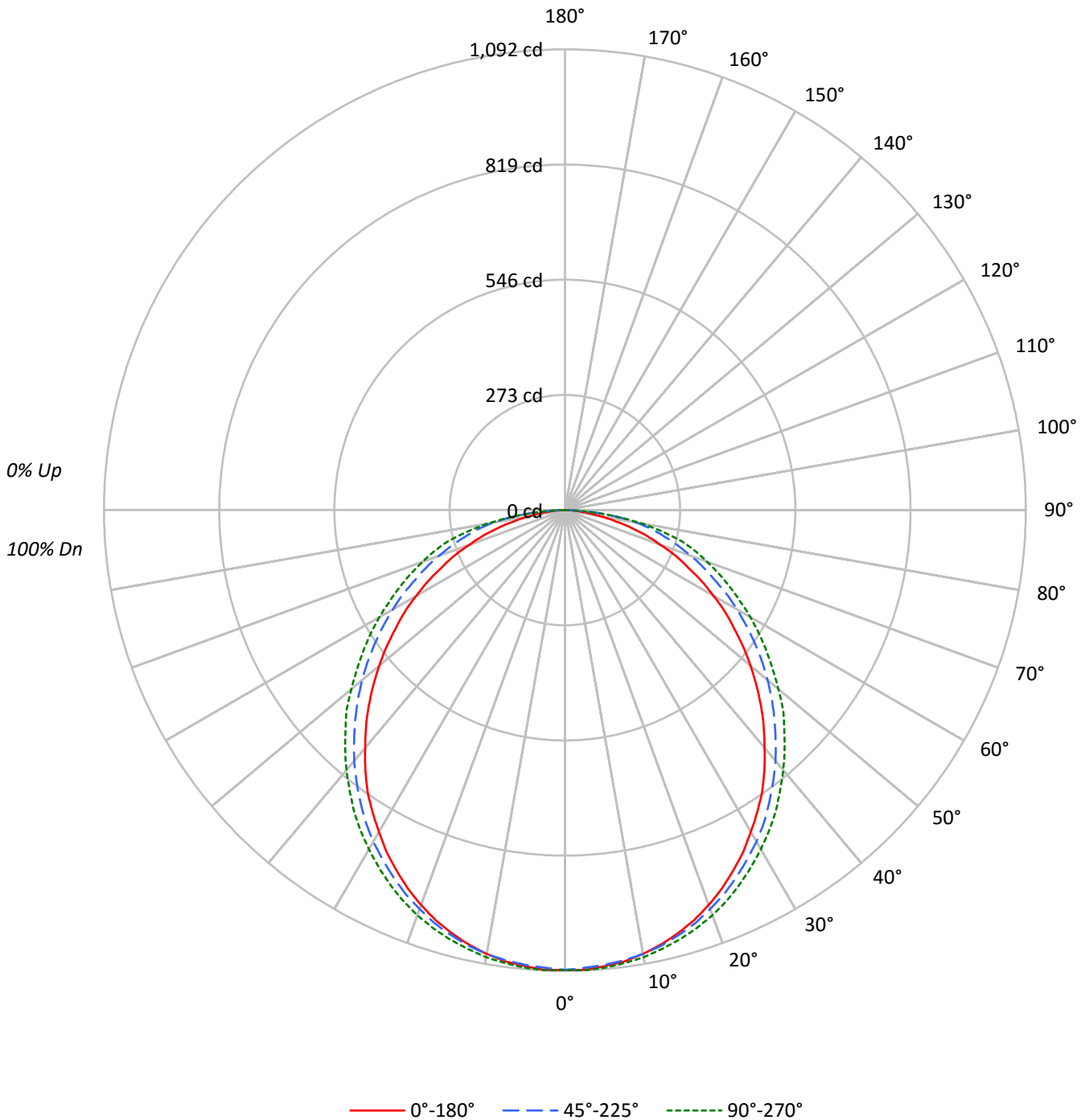
Input Watts (W): 26
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	93	97	93	90	93	90	88	89	87	85	83
2	98	90	83	77	96	88	81	76	84	79	74	81	76	72	78	74	71	69
3	89	79	70	64	87	77	69	63	74	67	62	71	66	61	69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53	63	57	52	61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42
6	70	56	47	40	68	55	47	40	53	46	40	52	45	40	50	44	39	37
7	64	51	42	36	63	50	42	36	48	41	35	47	40	35	46	39	35	33
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29
9	56	43	34	29	55	42	34	29	41	34	28	40	33	28	39	33	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1466	1466	1466
5°	1465	1461	1471
10°	1459	1459	1470
15°	1445	1452	1467
20°	1426	1440	1463
25°	1400	1426	1454
30°	1369	1410	1442
35°	1339	1387	1431
40°	1293	1364	1414
45°	1251	1337	1399
50°	1202	1312	1382
55°	1149	1287	1368
60°	1095	1267	1365
65°	1026	1245	1374
70°	950	1252	1411
75°	850	1275	1490
80°	687	1351	1458
85°	517	1187	1156



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	103.2	3.3
10°-20°	294.8	9.5
20°-30°	443.1	14.3
30°-40°	527.8	17.0
40°-50°	540.2	17.4
50°-60°	486.4	15.7
60°-70°	381.9	12.3
70°-80°	247.9	8.0
80°-90°	76.7	2.5
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°	841.1	27.1
0°-40°	1368.9	44.1
0°-60°	2395.5	77.2
0°-90°	3102.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3102.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1090	1090	1090	1090	1090	
5°	1085	1087	1082	1088	1089	103
15°	1038	1040	1042	1051	1053	293
25°	943	951	961	976	979	434
35°	815	825	844	865	871	508
45°	657	673	702	729	735	507
55°	490	511	549	577	583	439
65°	322	347	391	424	432	321
75°	164	195	245	279	287	173
85°	34	62	77	75	75	40
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1089.8	1089.8	1089.8	1089.8	1089.8
2.5°	1090.7	1090.7	1085.8	1090.7	1091.7
5°	1084.8	1086.8	1081.9	1087.8	1088.8
7.5°	1078.9	1078.9	1076.0	1081.9	1082.9
10°	1068.1	1069.1	1068.1	1075.0	1076.0
12.5°	1054.3	1056.3	1057.2	1064.1	1065.1
15°	1037.5	1040.5	1042.5	1051.3	1053.3
17.5°	1018.8	1021.8	1026.7	1036.5	1038.5
20°	996.1	1000.1	1006.0	1018.8	1021.8
22.5°	971.5	975.5	985.3	997.1	1002.1
25°	942.9	950.8	960.7	976.4	979.4
27.5°	914.4	921.3	934.1	950.8	954.8
30°	880.9	891.7	907.5	924.2	928.2
32.5°	848.4	859.2	877.9	895.6	900.6
35°	814.9	824.7	844.4	865.1	871.0
37.5°	776.4	789.2	810.9	831.6	837.5
40°	736.0	751.8	776.4	798.1	805.0
42.5°	697.6	714.3	739.0	762.6	770.5
45°	657.2	673.0	702.5	729.1	735.0
47.5°	615.8	633.6	665.1	691.7	701.5
50°	574.4	593.2	626.7	654.2	660.2
52.5°	533.1	552.8	588.2	617.8	620.7
55°	489.7	511.4	548.8	577.4	583.3
57.5°	450.3	469.0	509.4	539.0	545.9
60°	406.9	427.6	471.0	498.6	507.4
62.5°	365.6	387.2	432.6	460.1	468.0
65°	322.2	346.8	391.2	423.7	431.6
67.5°	284.8	308.4	355.7	387.2	395.1
70°	241.4	268.0	318.3	350.8	358.7
72.5°	204.0	231.5	281.8	313.3	325.2
75°	163.6	195.1	245.3	278.8	286.7
77.5°	124.1	160.6	211.8	237.5	237.5
80°	88.7	127.1	174.4	186.2	188.2
82.5°	58.1	95.6	129.1	128.1	128.1
85°	33.5	62.1	76.9	74.9	74.9
87.5°	12.8	25.6	27.6	27.6	26.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)