

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: P314215

Luminaire Tested: **24FCZ2-35HE-UNV-L83050-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: P314215
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-L83050-S-CA08-W2A-U-3000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.08" ACRYLIC 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: 3195.0 lumens
Efficiency: N/A
Efficacy: 123.4 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.27 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

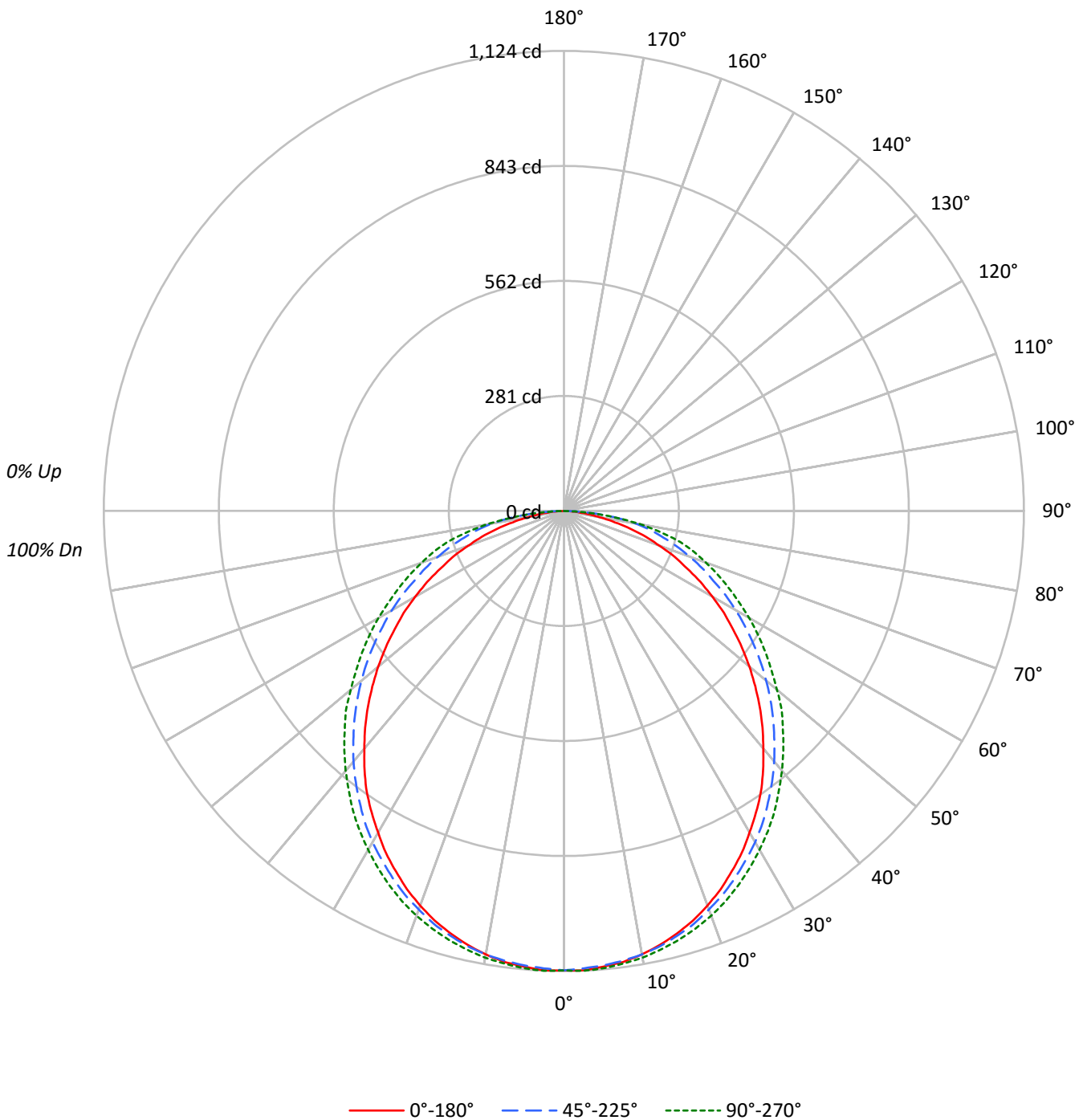
Input Watts (W): 25.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1510	1510	1510
5°	1509	1505	1515
10°	1503	1503	1514
15°	1489	1496	1511
20°	1469	1484	1507
25°	1442	1469	1498
30°	1410	1452	1485
35°	1379	1429	1474
40°	1332	1405	1456
45°	1288	1377	1441
50°	1239	1351	1423
55°	1183	1326	1409
60°	1128	1305	1406
65°	1057	1283	1415
70°	978	1290	1453
75°	876	1314	1535
80°	707	1392	1502
85°	533	1223	1190



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	106.3	3.3
10°-20°	303.6	9.5
20°-30°	456.4	14.3
30°-40°	543.7	17.0
40°-50°	556.4	17.4
50°-60°	500.9	15.7
60°-70°	393.4	12.3
70°-80°	255.3	8.0
80°-90°	79.0	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°	866.3	27.1
0°-40°	1410.0	44.1
0°-60°	2467.3	77.2
0°-90°	3195.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3195.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1122	1122	1122	1122	1122	
5°	1117	1119	1114	1120	1121	106
15°	1069	1072	1074	1083	1085	301
25°	971	979	990	1006	1009	447
35°	839	849	870	891	897	524
45°	677	693	724	751	757	522
55°	504	527	565	595	601	452
65°	332	357	403	436	444	330
75°	168	201	253	287	295	178
85°	34	64	79	77	77	42
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1122.4	1122.4	1122.4	1122.4	1122.4
2.5°	1123.4	1123.4	1118.4	1123.4	1124.5
5°	1117.4	1119.4	1114.3	1120.4	1121.4
7.5°	1111.3	1111.3	1108.2	1114.3	1115.3
10°	1100.1	1101.1	1100.1	1107.2	1108.2
12.5°	1085.9	1087.9	1088.9	1096.0	1097.1
15°	1068.6	1071.7	1073.7	1082.8	1084.9
17.5°	1049.4	1052.4	1057.5	1067.6	1069.7
20°	1026.0	1030.1	1036.2	1049.4	1052.4
22.5°	1000.6	1004.7	1014.9	1027.0	1032.1
25°	971.2	979.3	989.5	1005.7	1008.8
27.5°	941.8	948.9	962.1	979.3	983.4
30°	907.3	918.4	934.7	951.9	956.0
32.5°	873.8	884.9	904.2	922.5	927.6
35°	839.3	849.4	869.7	891.0	897.1
37.5°	799.7	812.9	835.2	856.5	862.6
40°	758.1	774.3	799.7	822.0	829.1
42.5°	718.5	735.8	761.1	785.5	793.6
45°	676.9	693.1	723.6	751.0	757.1
47.5°	634.3	652.5	685.0	712.4	722.6
50°	591.7	610.9	645.4	673.9	679.9
52.5°	549.0	569.3	605.9	636.3	639.4
55°	504.4	526.7	565.3	594.7	600.8
57.5°	463.8	483.1	524.7	555.1	562.2
60°	419.1	440.4	485.1	513.5	522.6
62.5°	376.5	398.8	445.5	473.9	482.1
65°	331.9	357.2	402.9	436.4	444.5
67.5°	293.3	317.6	366.4	398.8	407.0
70°	248.6	276.0	327.8	361.3	369.4
72.5°	210.1	238.5	290.2	322.7	334.9
75°	168.5	200.9	252.7	287.2	295.3
77.5°	127.9	165.4	218.2	244.6	244.6
80°	91.3	130.9	179.6	191.8	193.8
82.5°	59.9	98.4	132.9	131.9	131.9
85°	34.5	63.9	79.2	77.1	77.1
87.5°	13.2	26.4	28.4	28.4	27.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)