

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: P311292

Luminaire Tested: **24FCZ2-35HE-UNV-L82765-S-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: P311292  
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-CP250-W2A-U-3000K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH 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**

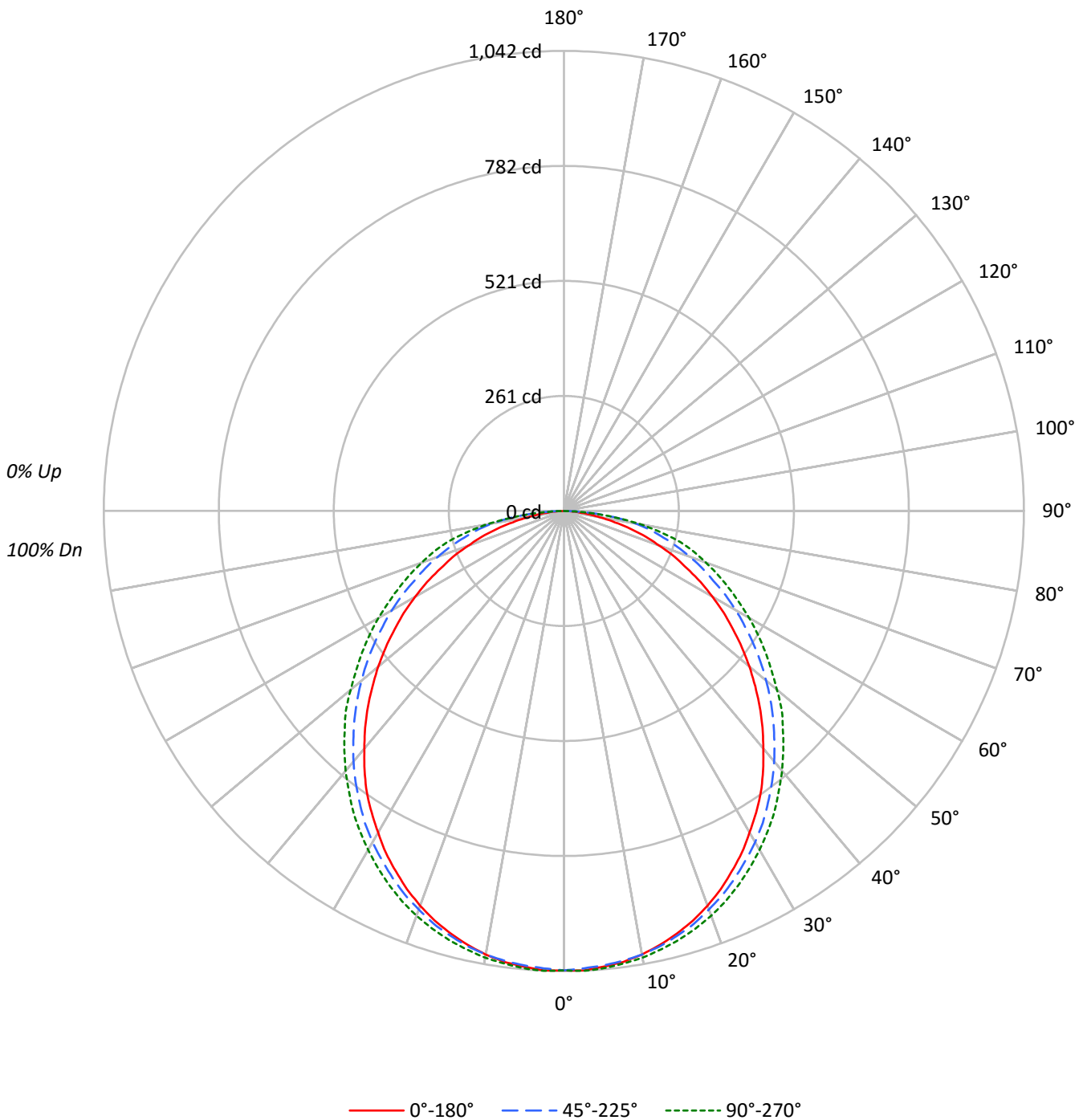
Lumens per Lamp: N/A  
Luminaire Lumens: 2962.0 lumens  
Efficiency: N/A  
Efficacy: 114.8 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 25.8  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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°	1400	1400	1400
5°	1399	1395	1404
10°	1393	1393	1404
15°	1380	1387	1401
20°	1362	1375	1397
25°	1337	1362	1388
30°	1307	1346	1377
35°	1278	1324	1366
40°	1234	1302	1350
45°	1194	1276	1336
50°	1148	1253	1320
55°	1097	1229	1307
60°	1046	1210	1304
65°	980	1189	1312
70°	907	1196	1347
75°	812	1218	1423
80°	656	1290	1392
85°	494	1133	1104



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	98.5	3.3
10°-20°	281.5	9.5
20°-30°	423.1	14.3
30°-40°	504.0	17.0
40°-50°	515.8	17.4
50°-60°	464.4	15.7
60°-70°	364.7	12.3
70°-80°	236.7	8.0
80°-90°	73.2	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°	803.1	27.1
0°-40°	1307.1	44.1
0°-60°	2287.4	77.2
0°-90°	2962.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2962.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1041	1041	1041	1041	1041	
5°	1036	1038	1033	1039	1040	98
15°	991	994	995	1004	1006	279
25°	900	908	917	932	935	415
35°	778	788	806	826	832	485
45°	628	643	671	696	702	484
55°	468	488	524	551	557	419
65°	308	331	374	405	412	306
75°	156	186	234	266	274	165
85°	32	59	73	72	72	39
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1040.6	1040.6	1040.6	1040.6	1040.6
2.5°	1041.5	1041.5	1036.8	1041.5	1042.5
5°	1035.9	1037.7	1033.0	1038.7	1039.6
7.5°	1030.2	1030.2	1027.4	1033.0	1034.0
10°	1019.9	1020.8	1019.9	1026.5	1027.4
12.5°	1006.7	1008.6	1009.5	1016.1	1017.0
15°	990.7	993.5	995.4	1003.9	1005.8
17.5°	972.8	975.7	980.4	989.8	991.6
20°	951.2	955.0	960.6	972.8	975.7
22.5°	927.7	931.4	940.8	952.1	956.8
25°	900.4	907.9	917.3	932.4	935.2
27.5°	873.1	879.7	891.9	907.9	911.7
30°	841.1	851.5	866.5	882.5	886.3
32.5°	810.1	820.4	838.3	855.2	859.9
35°	778.1	787.5	806.3	826.1	831.7
37.5°	741.4	753.6	774.3	794.1	799.7
40°	702.8	717.9	741.4	762.1	768.7
42.5°	666.1	682.1	705.6	728.2	735.7
45°	627.5	642.6	670.8	696.2	701.9
47.5°	588.0	605.0	635.1	660.5	669.9
50°	548.5	566.4	598.4	624.7	630.4
52.5°	509.0	527.8	561.7	589.9	592.7
55°	467.6	488.3	524.0	551.3	557.0
57.5°	430.0	447.8	486.4	514.6	521.2
60°	388.6	408.3	449.7	476.1	484.5
62.5°	349.1	369.8	413.0	439.4	446.9
65°	307.7	331.2	373.5	404.6	412.1
67.5°	271.9	294.5	339.6	369.8	377.3
70°	230.5	255.9	303.9	334.9	342.5
72.5°	194.8	221.1	269.1	299.2	310.5
75°	156.2	186.3	234.3	266.3	273.8
77.5°	118.5	153.4	202.3	226.7	226.7
80°	84.7	121.4	166.5	177.8	179.7
82.5°	55.5	91.3	123.3	122.3	122.3
85°	32.0	59.3	73.4	71.5	71.5
87.5°	12.2	24.5	26.3	26.3	25.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)