

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: P311291

Luminaire Tested: **24FCZ2-35HE-UNV-L82765-S-CP250-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: P311291
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-2700K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.250" POLYCARB 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: 2879.0 lumens
Efficiency: N/A
Efficacy: 110.7 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

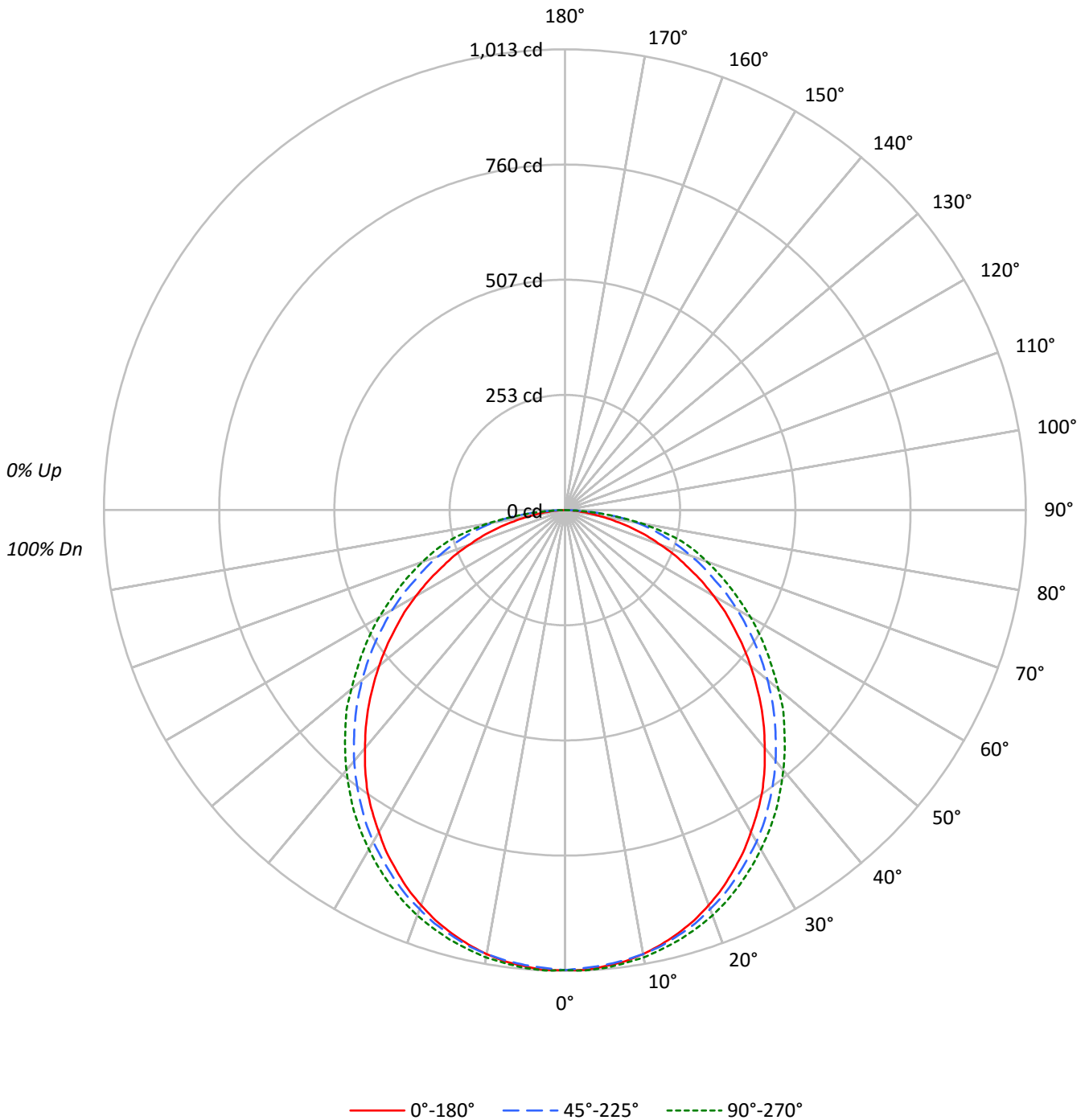
Input Watts (W): 26
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1361	1361	1361
5°	1360	1356	1365
10°	1354	1354	1364
15°	1341	1348	1362
20°	1324	1337	1358
25°	1299	1324	1349
30°	1270	1308	1338
35°	1242	1287	1328
40°	1200	1266	1312
45°	1161	1241	1298
50°	1116	1217	1283
55°	1066	1195	1270
60°	1016	1176	1267
65°	952	1156	1275
70°	881	1162	1310
75°	789	1184	1383
80°	638	1254	1354
85°	480	1101	1073



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	95.8	3.3
10°-20°	273.6	9.5
20°-30°	411.3	14.3
30°-40°	489.9	17.0
40°-50°	501.4	17.4
50°-60°	451.4	15.7
60°-70°	354.5	12.3
70°-80°	230.1	8.0
80°-90°	71.2	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°	780.6	27.1
0°-40°	1270.5	44.1
0°-60°	2223.3	77.2
0°-90°	2879.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2879.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1011	1011	1011	1011	1011	
5°	1007	1009	1004	1010	1010	96
15°	963	966	968	976	978	272
25°	875	882	892	906	909	403
35°	756	765	784	803	808	472
45°	610	625	652	677	682	470
55°	454	475	509	536	541	407
65°	299	322	363	393	400	298
75°	152	181	228	259	266	161
85°	31	58	71	70	70	38
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1011.4	1011.4	1011.4	1011.4	1011.4
2.5°	1012.3	1012.3	1007.8	1012.3	1013.2
5°	1006.8	1008.7	1004.1	1009.6	1010.5
7.5°	1001.4	1001.4	998.6	1004.1	1005.0
10°	991.3	992.2	991.3	997.7	998.6
12.5°	978.5	980.3	981.2	987.6	988.5
15°	962.9	965.7	967.5	975.7	977.6
17.5°	945.6	948.3	952.9	962.0	963.9
20°	924.5	928.2	933.7	945.6	948.3
22.5°	901.7	905.3	914.5	925.5	930.0
25°	875.2	882.5	891.6	906.2	909.0
27.5°	848.6	855.0	866.9	882.5	886.1
30°	817.5	827.6	842.2	857.8	861.4
32.5°	787.4	797.4	814.8	831.3	835.8
35°	756.3	765.4	783.7	802.9	808.4
37.5°	720.6	732.5	752.6	771.8	777.3
40°	683.1	697.7	720.6	740.7	747.1
42.5°	647.4	663.0	685.9	707.8	715.1
45°	610.0	624.6	652.0	676.7	682.2
47.5°	571.5	588.0	617.3	642.0	651.1
50°	533.1	550.5	581.6	607.2	612.7
52.5°	494.7	513.0	545.9	573.4	576.1
55°	454.5	474.6	509.4	535.9	541.4
57.5°	417.9	435.3	472.8	500.2	506.6
60°	377.7	396.9	437.1	462.7	471.0
62.5°	339.3	359.4	401.5	427.1	434.4
65°	299.0	321.9	363.0	393.2	400.5
67.5°	264.3	286.2	330.1	359.4	366.7
70°	224.0	248.7	295.4	325.6	332.9
72.5°	189.3	214.9	261.5	290.8	301.8
75°	151.8	181.1	227.7	258.8	266.1
77.5°	115.2	149.1	196.6	220.4	220.4
80°	82.3	118.0	161.9	172.8	174.7
82.5°	54.0	88.7	119.8	118.9	118.9
85°	31.1	57.6	71.3	69.5	69.5
87.5°	11.9	23.8	25.6	25.6	24.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)