

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: P309089

Luminaire Tested: **22FCZ2-39HE-UNV-L82765-S-CP250-W2A-U-4000K**

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: P309089
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-23)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 22FCZ2-39HE-UNV-L82765-S-CP250-W2A-U-4000K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS, 0.250" POLYCARB SHEET
Light Source: (168) 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: 3466.0 lumens
Efficiency: N/A
Efficacy: 105.7 lumens/watt
Spacing Criteria (0/90/45): 1.18 / 1.26 / 1.34
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

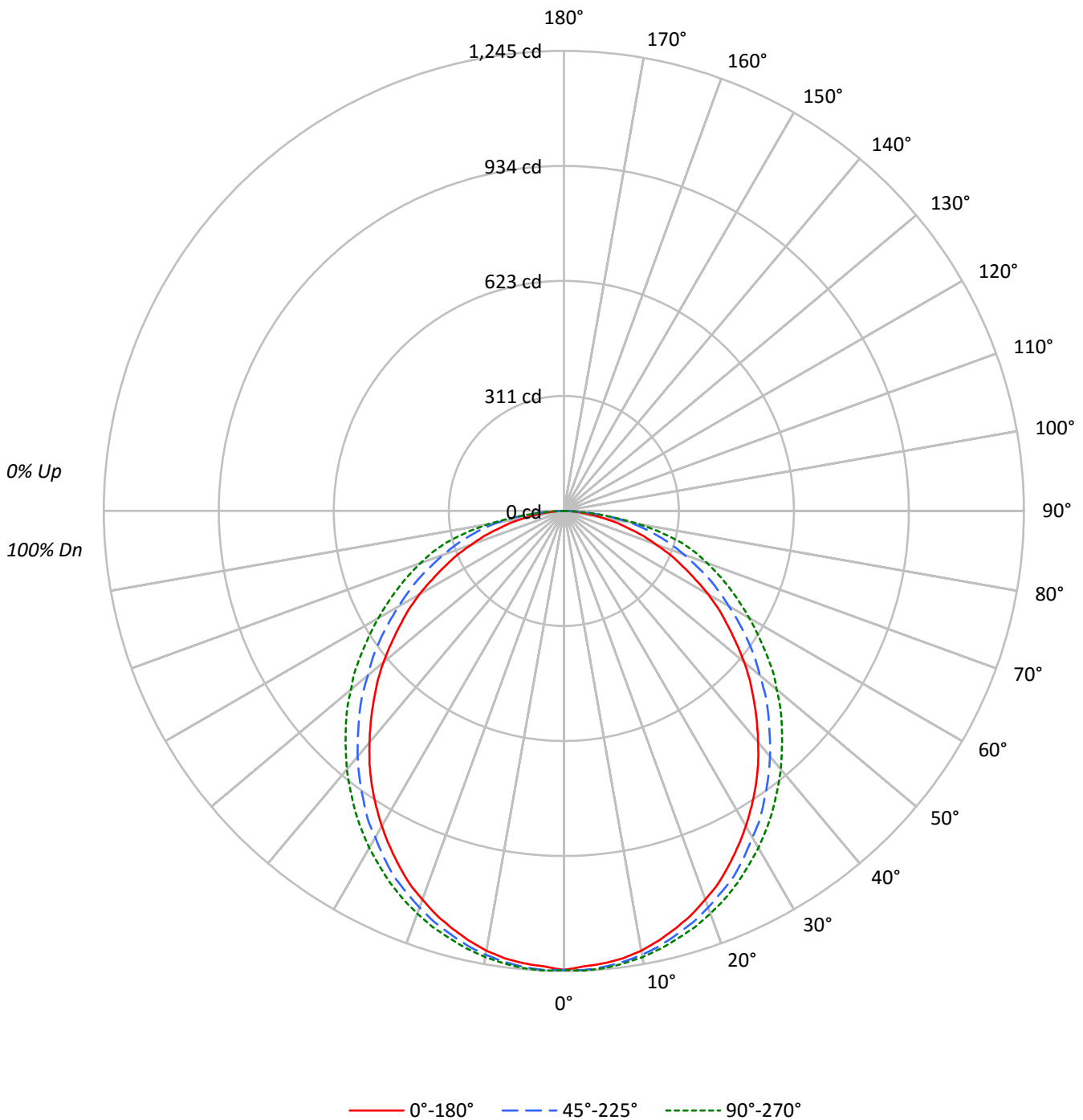
Input Watts (W): 32.8
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	94	97	94	91	93	90	88	89	87	85	83
2	98	90	83	77	96	88	82	76	84	79	74	81	77	73	78	74	71	69
3	90	79	71	64	87	77	70	63	74	68	62	72	66	61	69	64	60	58
4	82	70	61	54	80	69	60	54	66	59	53	64	57	52	61	56	52	49
5	75	62	53	47	73	61	53	46	59	52	46	57	51	45	55	50	45	43
6	70	56	47	41	68	55	47	41	53	46	40	52	45	40	50	44	39	37
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	33
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	31	30
9	56	43	35	29	55	42	34	29	41	34	29	40	33	29	39	33	28	27
10	53	40	32	26	51	39	31	26	38	31	26	37	31	26	36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3342	3342	3342
5°	3320	3346	3355
10°	3301	3332	3349
15°	3257	3302	3334
20°	3205	3269	3320
25°	3140	3236	3299
30°	3060	3171	3271
35°	2975	3113	3241
40°	2875	3051	3210
45°	2769	2979	3176
50°	2668	2897	3148
55°	2541	2845	3126
60°	2428	2777	3116
65°	2266	2760	3151
70°	2087	2736	3245
75°	1883	2774	3413
80°	1629	2858	3208
85°	1349	2396	2396



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	117.4	3.4
10°-20°	334.2	9.6
20°-30°	500.1	14.4
30°-40°	592.3	17.1
40°-50°	603.6	17.4
50°-60°	541.0	15.6
60°-70°	423.5	12.2
70°-80°	273.1	7.9
80°-90°	80.7	2.3
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°	951.8	27.5
0°-40°	1544.1	44.5
0°-60°	2688.7	77.6
0°-90°	3466.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3466.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1242	1242	1242	1242	1242	
5°	1229	1232	1239	1240	1242	117
15°	1169	1176	1185	1195	1197	330
25°	1058	1067	1090	1104	1111	487
35°	906	917	948	977	986	566
45°	728	744	783	823	834	562
55°	542	560	606	648	666	486
65°	356	377	433	475	495	353
75°	181	209	267	312	328	194
85°	44	60	78	78	78	51
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1242.0	1242.0	1242.0	1242.0	1242.0
2.5°	1233.9	1237.1	1243.6	1245.2	1245.2
5°	1229.0	1232.3	1238.7	1240.4	1242.0
7.5°	1221.0	1222.6	1230.7	1233.9	1235.5
10°	1208.0	1211.2	1219.3	1224.2	1225.8
12.5°	1190.2	1195.1	1204.8	1211.2	1212.9
15°	1169.2	1175.7	1185.4	1195.1	1196.7
17.5°	1146.6	1153.0	1166.0	1177.3	1180.5
20°	1119.1	1127.2	1141.7	1154.6	1159.5
22.5°	1091.6	1098.0	1115.8	1132.0	1136.9
25°	1057.6	1067.3	1090.0	1104.5	1111.0
27.5°	1022.0	1033.4	1056.0	1075.4	1081.9
30°	984.8	996.2	1020.4	1044.7	1052.8
32.5°	946.0	959.0	988.1	1012.3	1020.4
35°	905.6	916.9	947.7	976.8	986.5
37.5°	863.6	873.3	908.8	939.6	949.3
40°	818.3	831.2	868.4	904.0	913.7
42.5°	773.0	787.6	824.7	863.6	873.3
45°	727.7	743.9	782.7	823.1	834.5
47.5°	684.1	697.0	740.7	779.5	795.6
50°	637.2	650.1	692.1	735.8	752.0
52.5°	588.6	606.4	651.7	693.8	713.2
55°	541.7	559.5	606.4	648.5	666.3
57.5°	498.1	512.6	561.2	604.8	622.6
60°	451.2	464.1	515.9	562.8	578.9
62.5°	401.1	420.5	473.8	517.5	536.9
65°	355.8	376.8	433.4	475.4	494.8
67.5°	313.7	333.1	388.1	433.4	454.4
70°	265.2	291.1	347.7	393.0	412.4
72.5°	226.4	249.0	307.3	352.5	373.6
75°	181.1	208.6	266.8	312.1	328.3
77.5°	143.9	171.4	226.4	262.0	270.1
80°	105.1	132.6	184.4	202.1	207.0
82.5°	71.2	97.0	132.6	137.5	139.1
85°	43.7	59.8	77.6	77.6	77.6
87.5°	21.0	24.3	27.5	25.9	25.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)