

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: P309091

Luminaire Tested: **22FCZ2-39HE-UNV-L82765-S-CP250-W2A-U-5000K**

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: P309091
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-5000K
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: 3575.0 lumens
Efficiency: N/A
Efficacy: 107.7 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

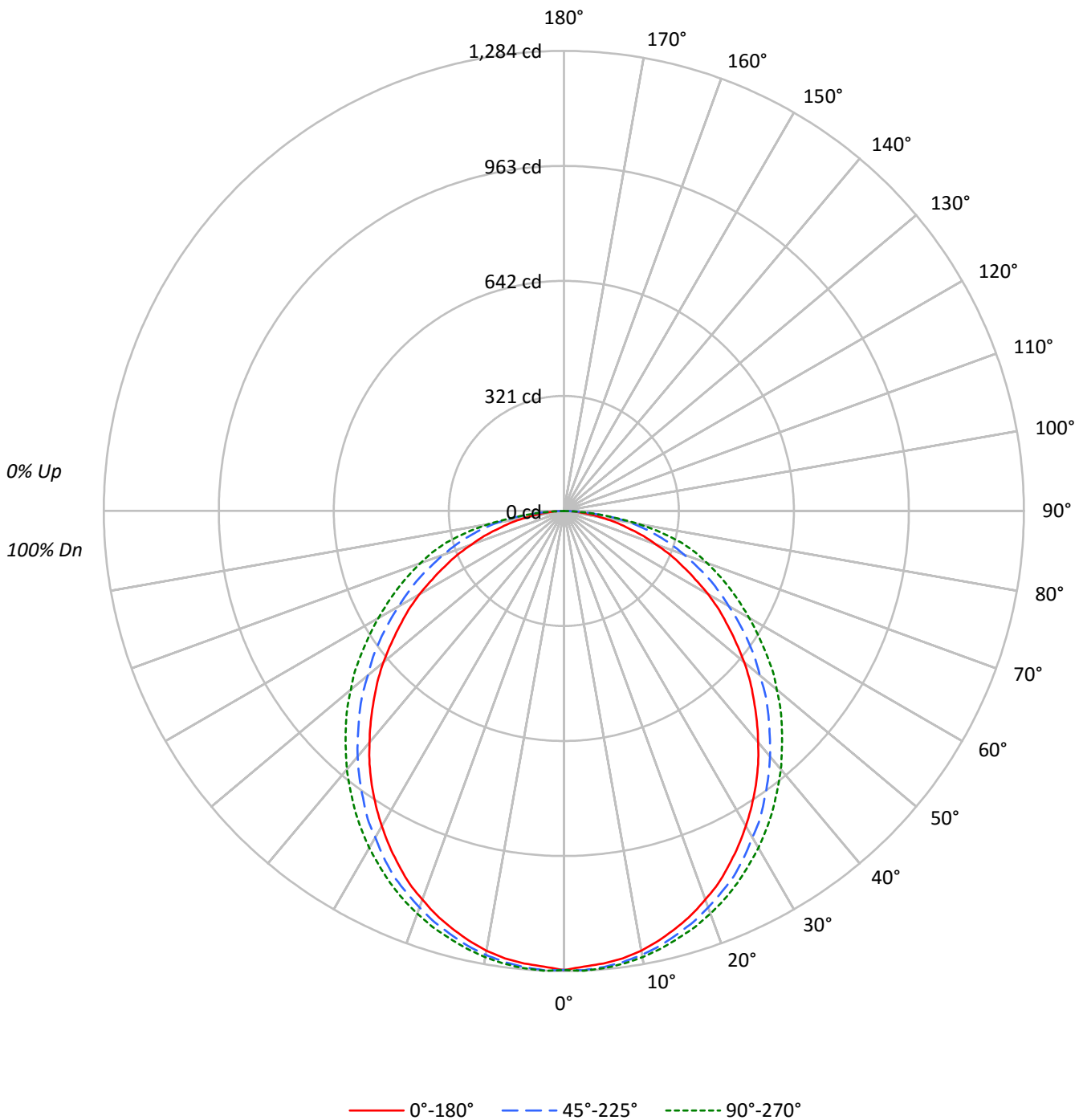
Input Watts (W): 33.2
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	3447	3447	3447
5°	3424	3451	3460
10°	3405	3437	3455
15°	3360	3406	3439
20°	3306	3372	3425
25°	3239	3338	3402
30°	3156	3270	3374
35°	3069	3211	3343
40°	2965	3146	3310
45°	2856	3072	3275
50°	2751	2989	3247
55°	2622	2935	3224
60°	2505	2864	3214
65°	2337	2846	3250
70°	2153	2821	3346
75°	1942	2861	3520
80°	1680	2947	3309
85°	1389	2473	2473



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	121.1	3.4
10°-20°	344.8	9.6
20°-30°	515.8	14.4
30°-40°	610.9	17.1
40°-50°	622.6	17.4
50°-60°	558.0	15.6
60°-70°	436.9	12.2
70°-80°	281.7	7.9
80°-90°	83.2	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°	981.7	27.5
0°-40°	1592.6	44.5
0°-60°	2773.2	77.6
0°-90°	3575.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3575.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1281	1281	1281	1281	1281	
5°	1268	1271	1278	1279	1281	120
15°	1206	1213	1223	1233	1234	340
25°	1091	1101	1124	1139	1146	502
35°	934	946	978	1008	1018	584
45°	751	767	807	849	861	580
55°	559	577	626	669	687	501
65°	367	389	447	490	510	365
75°	187	215	275	322	339	200
85°	45	62	80	80	80	53
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1281.0	1281.0	1281.0	1281.0	1281.0
2.5°	1272.7	1276.0	1282.7	1284.4	1284.4
5°	1267.7	1271.0	1277.7	1279.4	1281.0
7.5°	1259.3	1261.0	1269.4	1272.7	1274.4
10°	1246.0	1249.3	1257.7	1262.7	1264.4
12.5°	1227.7	1232.7	1242.7	1249.3	1251.0
15°	1206.0	1212.6	1222.7	1232.7	1234.3
17.5°	1182.6	1189.3	1202.6	1214.3	1217.6
20°	1154.3	1162.6	1177.6	1191.0	1196.0
22.5°	1125.9	1132.6	1150.9	1167.6	1172.6
25°	1090.9	1100.9	1124.2	1139.3	1145.9
27.5°	1054.2	1065.9	1089.2	1109.2	1115.9
30°	1015.8	1027.5	1052.5	1077.5	1085.9
32.5°	975.8	989.1	1019.2	1044.2	1052.5
35°	934.1	945.8	977.5	1007.5	1017.5
37.5°	890.7	900.7	937.4	969.1	979.1
40°	844.0	857.4	895.7	932.4	942.4
42.5°	797.3	812.3	850.7	890.7	900.7
45°	750.6	767.3	807.3	849.0	860.7
47.5°	705.6	718.9	763.9	804.0	820.7
50°	657.2	670.5	713.9	758.9	775.6
52.5°	607.2	625.5	672.2	715.6	735.6
55°	558.8	577.1	625.5	668.9	687.2
57.5°	513.7	528.8	578.8	623.8	642.2
60°	465.4	478.7	532.1	580.5	597.1
62.5°	413.7	433.7	488.7	533.8	553.8
65°	367.0	388.6	447.0	490.4	510.4
67.5°	323.6	343.6	400.3	447.0	468.7
70°	273.6	300.2	358.6	405.3	425.3
72.5°	233.5	256.9	316.9	363.6	385.3
75°	186.8	215.2	275.2	321.9	338.6
77.5°	148.5	176.8	233.5	270.2	278.6
80°	108.4	136.8	190.2	208.5	213.5
82.5°	73.4	100.1	136.8	141.8	143.4
85°	45.0	61.7	80.1	80.1	80.1
87.5°	21.7	25.0	28.4	26.7	26.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)