

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: P309070

Luminaire Tested: **22FCZ2-39HE-UNV-L82765-S-CP125-W2A-U-3500K**

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: P309070
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-CP125-W2A-U-3500K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS, 0.125" 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: 3570.0 lumens
Efficiency: N/A
Efficacy: 109.5 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

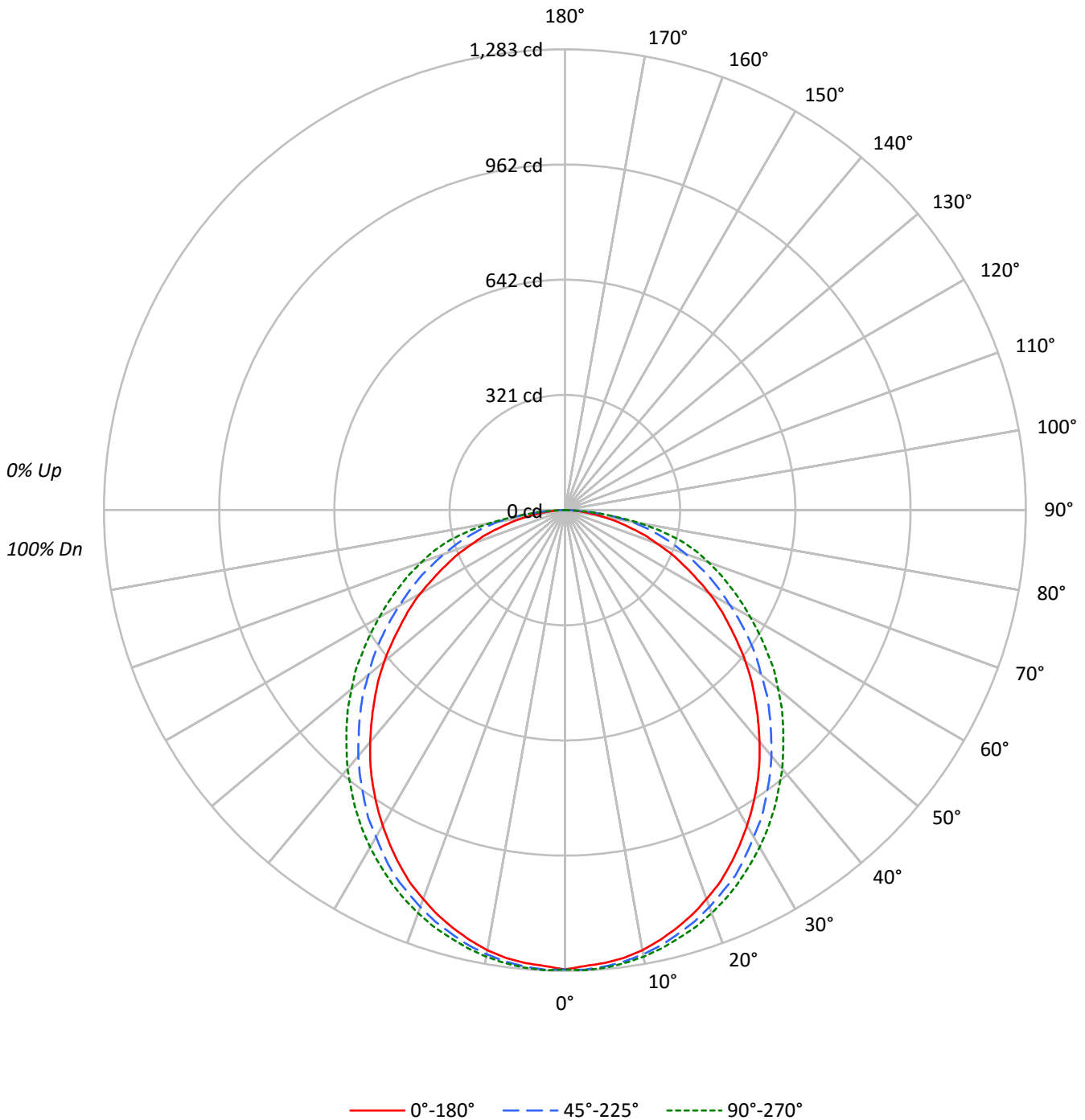
Input Watts (W): 32.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	3442	3442	3442
5°	3420	3447	3455
10°	3400	3432	3450
15°	3355	3401	3434
20°	3301	3368	3420
25°	3235	3333	3398
30°	3152	3266	3370
35°	3064	3207	3338
40°	2961	3142	3306
45°	2853	3068	3271
50°	2748	2984	3242
55°	2618	2930	3220
60°	2501	2860	3209
65°	2333	2842	3245
70°	2150	2817	3341
75°	1940	2857	3515
80°	1678	2943	3304
85°	1389	2470	2470



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	121.0	3.4
10°-20°	344.3	9.6
20°-30°	515.1	14.4
30°-40°	610.0	17.1
40°-50°	621.7	17.4
50°-60°	557.2	15.6
60°-70°	436.3	12.2
70°-80°	281.3	7.9
80°-90°	83.1	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°	980.4	27.5
0°-40°	1590.4	44.5
0°-60°	2769.3	77.6
0°-90°	3570.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3570.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1279	1279	1279	1279	1279	
5°	1266	1269	1276	1278	1279	120
15°	1204	1211	1221	1231	1233	340
25°	1089	1099	1123	1138	1144	501
35°	933	944	976	1006	1016	583
45°	750	766	806	848	860	579
55°	558	576	625	668	686	500
65°	366	388	446	490	510	364
75°	187	215	275	322	338	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°	1279.2	1279.2	1279.2	1279.2	1279.2
2.5°	1270.9	1274.2	1280.9	1282.6	1282.6
5°	1265.9	1269.2	1275.9	1277.6	1279.2
7.5°	1257.6	1259.3	1267.6	1270.9	1272.6
10°	1244.3	1247.6	1255.9	1260.9	1262.6
12.5°	1225.9	1230.9	1240.9	1247.6	1249.3
15°	1204.3	1210.9	1220.9	1230.9	1232.6
17.5°	1181.0	1187.6	1201.0	1212.6	1215.9
20°	1152.7	1161.0	1176.0	1189.3	1194.3
22.5°	1124.3	1131.0	1149.3	1166.0	1171.0
25°	1089.4	1099.3	1122.7	1137.7	1144.3
27.5°	1052.7	1064.4	1087.7	1107.7	1114.3
30°	1014.4	1026.1	1051.0	1076.0	1084.4
32.5°	974.4	987.7	1017.7	1042.7	1051.0
35°	932.8	944.4	976.1	1006.1	1016.1
37.5°	889.5	899.5	936.1	967.8	977.8
40°	842.8	856.2	894.5	931.1	941.1
42.5°	796.2	811.2	849.5	889.5	899.5
45°	749.6	766.2	806.2	847.8	859.5
47.5°	704.6	717.9	762.9	802.9	819.5
50°	656.3	669.6	712.9	757.9	774.5
52.5°	606.3	624.6	671.3	714.6	734.6
55°	558.0	576.3	624.6	667.9	686.3
57.5°	513.0	528.0	578.0	623.0	641.3
60°	464.7	478.1	531.4	579.7	596.3
62.5°	413.1	433.1	488.0	533.0	553.0
65°	366.4	388.1	446.4	489.7	509.7
67.5°	323.1	343.1	399.8	446.4	468.1
70°	273.2	299.8	358.1	404.8	424.7
72.5°	233.2	256.5	316.5	363.1	384.8
75°	186.6	214.9	274.8	321.5	338.1
77.5°	148.2	176.6	233.2	269.8	278.2
80°	108.3	136.6	189.9	208.2	213.2
82.5°	73.3	99.9	136.6	141.6	143.2
85°	45.0	61.6	80.0	80.0	80.0
87.5°	21.7	25.0	28.3	26.7	26.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)