

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: P309059

Luminaire Tested: **22FCZ2-39HE-UNV-L82765-S-CA125-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: P309059
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-CA125-W2A-U-2700K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS, 0.125" ACRYLIC 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: 3421.0 lumens
Efficiency: N/A
Efficacy: 105.6 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

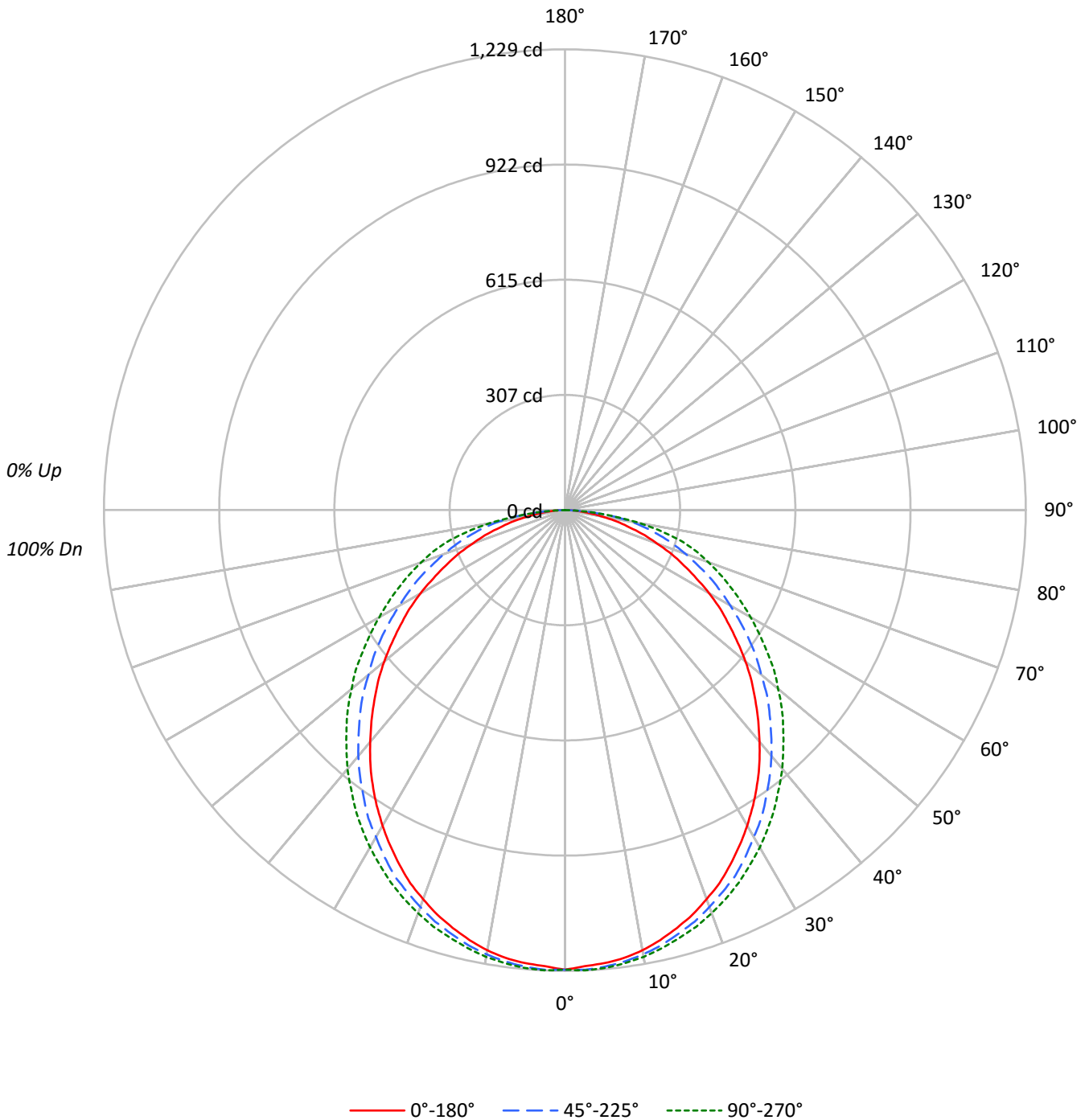
Input Watts (W): 32.4
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	3299	3299	3299
5°	3277	3303	3311
10°	3258	3289	3306
15°	3215	3260	3291
20°	3163	3227	3277
25°	3100	3194	3256
30°	3021	3130	3229
35°	2936	3073	3199
40°	2837	3011	3168
45°	2734	2940	3134
50°	2633	2860	3107
55°	2509	2808	3085
60°	2397	2740	3075
65°	2236	2724	3110
70°	2060	2700	3202
75°	1859	2739	3369
80°	1609	2820	3166
85°	1331	2365	2365



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	115.9	3.4
10°-20°	329.9	9.6
20°-30°	493.6	14.4
30°-40°	584.6	17.1
40°-50°	595.7	17.4
50°-60°	534.0	15.6
60°-70°	418.1	12.2
70°-80°	269.6	7.9
80°-90°	79.6	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°	939.5	27.5
0°-40°	1524.0	44.5
0°-60°	2653.8	77.6
0°-90°	3421.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3421.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1226	1226	1226	1226	1226	
5°	1213	1216	1223	1224	1226	115
15°	1154	1160	1170	1180	1181	325
25°	1044	1054	1076	1090	1097	481
35°	894	905	935	964	974	559
45°	718	734	772	812	824	555
55°	535	552	599	640	658	479
65°	351	372	428	469	488	349
75°	179	206	263	308	324	192
85°	43	59	77	77	77	51
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1225.9	1225.9	1225.9	1225.9	1225.9
2.5°	1217.9	1221.1	1227.4	1229.0	1229.0
5°	1213.1	1216.3	1222.7	1224.3	1225.9
7.5°	1205.1	1206.7	1214.7	1217.9	1219.5
10°	1192.3	1195.5	1203.5	1208.3	1209.9
12.5°	1174.8	1179.6	1189.1	1195.5	1197.1
15°	1154.0	1160.4	1170.0	1179.6	1181.2
17.5°	1131.7	1138.1	1150.8	1162.0	1165.2
20°	1104.5	1112.5	1126.9	1139.7	1144.4
22.5°	1077.4	1083.8	1101.4	1117.3	1122.1
25°	1043.9	1053.5	1075.8	1090.2	1096.6
27.5°	1008.8	1019.9	1042.3	1061.4	1067.8
30°	972.1	983.2	1007.2	1031.1	1039.1
32.5°	933.8	946.5	975.3	999.2	1007.2
35°	893.8	905.0	935.3	964.1	973.7
37.5°	852.3	861.9	897.0	927.4	936.9
40°	807.7	820.4	857.1	892.3	901.8
42.5°	763.0	777.3	814.0	852.3	861.9
45°	718.3	734.2	772.5	812.4	823.6
47.5°	675.2	687.9	731.0	769.3	785.3
50°	628.9	641.7	683.2	726.3	742.2
52.5°	581.0	598.6	643.3	684.8	703.9
55°	534.7	552.3	598.6	640.1	657.6
57.5°	491.6	506.0	553.9	597.0	614.5
60°	445.3	458.1	509.2	555.5	571.4
62.5°	395.8	415.0	467.7	510.8	529.9
65°	351.2	371.9	427.8	469.3	488.4
67.5°	309.7	328.8	383.1	427.8	448.5
70°	261.8	287.3	343.2	387.9	407.0
72.5°	223.5	245.8	303.3	348.0	368.7
75°	178.8	205.9	263.4	308.1	324.0
77.5°	142.1	169.2	223.5	258.6	266.6
80°	103.8	130.9	182.0	199.5	204.3
82.5°	70.2	95.8	130.9	135.7	137.3
85°	43.1	59.1	76.6	76.6	76.6
87.5°	20.8	23.9	27.1	25.5	25.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)