

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: P308782

Luminaire Tested: **22FCZ2-39HE-UNV-L82765-CA08-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: P308782
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-33)
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-CA08-W2A-U-3500K
Description: 2'X2' TROFFER LED MODULE, RIBBED LENS, 0.08" 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: 3464.0 lumens
Efficiency: N/A
Efficacy: 106.3 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.28 / 1.37
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

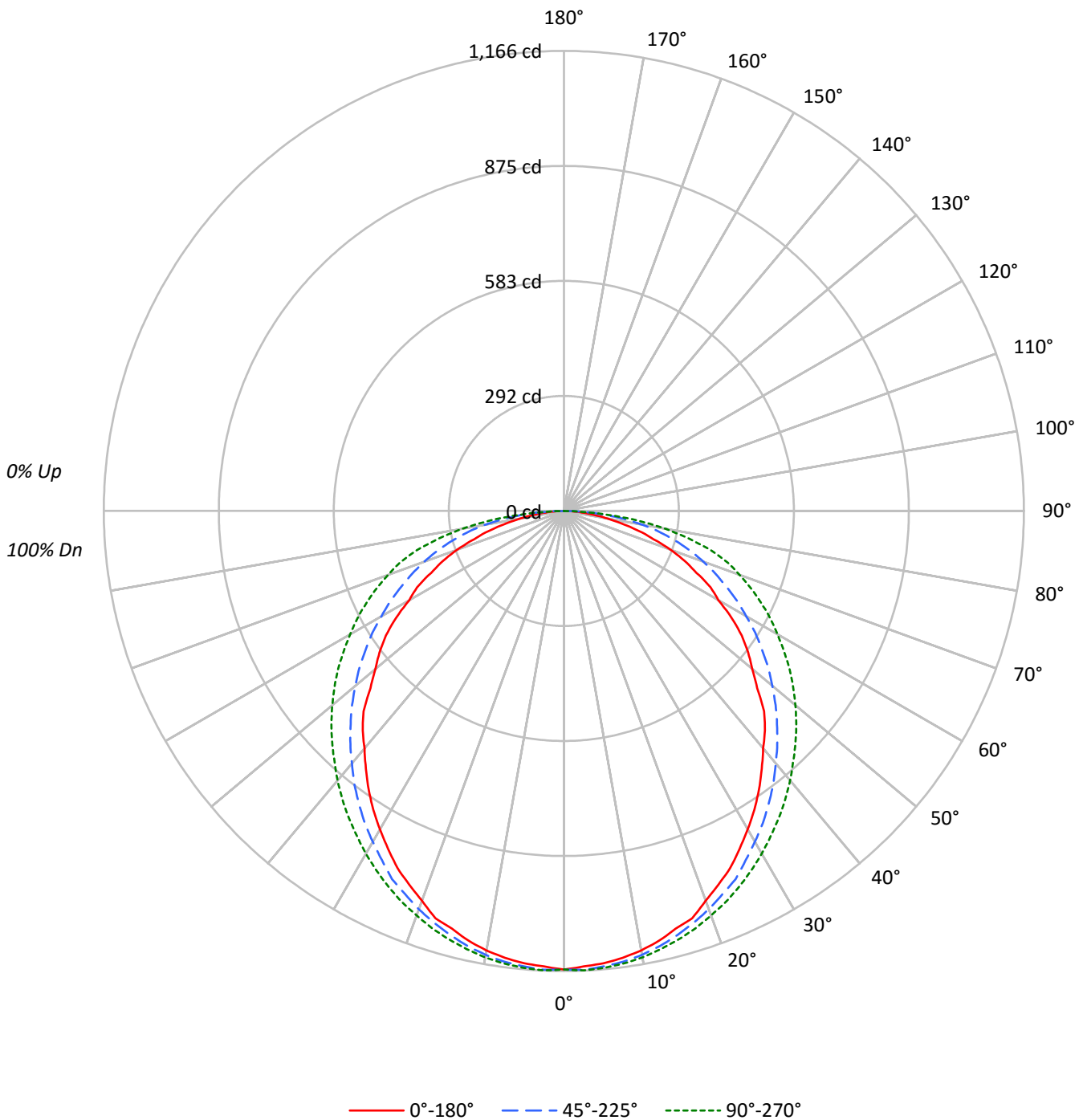
Input Watts (W): 32.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	98	94	105	100	96	92	96	93	90	92	89	87	89	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	59	56
4	81	69	60	53	79	67	59	52	65	57	51	62	56	51	60	55	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	39	51	44	38	49	43	38	36
7	64	50	41	35	62	49	40	34	47	40	34	46	39	34	45	38	34	32
8	59	45	37	31	58	45	36	31	43	36	30	42	35	30	41	35	30	28
9	55	42	33	28	54	41	33	28	40	33	27	39	32	27	38	32	27	25
10	52	38	30	25	51	38	30	25	37	30	25	36	29	25	35	29	25	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3127	3127	3127
5°	3108	3130	3139
10°	3090	3121	3139
15°	3053	3099	3132
20°	3010	3076	3124
25°	2964	3057	3121
30°	2895	3008	3117
35°	2832	2974	3121
40°	2761	2935	3133
45°	2732	2909	3161
50°	2610	2887	3207
55°	2582	2878	3275
60°	2436	2873	3364
65°	2365	2893	3515
70°	2270	2961	3731
75°	2069	3052	4016
80°	1773	3160	4060
85°	1433	3020	3480



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	110.0	3.2
10°-20°	313.7	9.1
20°-30°	472.2	13.6
30°-40°	566.7	16.4
40°-50°	592.3	17.1
50°-60°	552.0	15.9
60°-70°	452.7	13.1
70°-80°	305.1	8.8
80°-90°	99.4	2.9
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°	895.9	25.9
0°-40°	1462.6	42.2
0°-60°	2606.9	75.3
0°-90°	3464.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3464.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1162	1162	1162	1162	1162	
5°	1151	1154	1159	1160	1162	109
15°	1096	1102	1112	1122	1124	310
25°	998	1005	1030	1044	1051	459
35°	862	874	905	937	950	539
45°	718	723	764	811	831	548
55°	550	560	613	672	698	488
65°	371	388	454	521	552	369
75°	199	220	294	360	386	209
85°	46	66	98	114	113	55
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1162.2	1162.2	1162.2	1162.2	1162.2
2.5°	1155.6	1158.9	1163.9	1165.5	1165.5
5°	1150.6	1153.9	1158.9	1160.5	1162.2
7.5°	1142.3	1145.6	1152.3	1155.6	1157.2
10°	1130.7	1134.0	1142.3	1147.3	1148.9
12.5°	1115.8	1119.1	1129.0	1135.7	1137.3
15°	1095.9	1102.5	1112.5	1122.4	1124.1
17.5°	1082.6	1081.0	1094.2	1105.8	1109.1
20°	1051.1	1059.4	1074.3	1087.6	1090.9
22.5°	1024.6	1031.2	1051.1	1066.0	1072.7
25°	998.1	1004.7	1029.6	1044.5	1051.1
27.5°	964.9	974.9	998.1	1019.6	1027.9
30°	931.8	941.7	968.2	993.1	1003.0
32.5°	898.6	910.2	938.4	964.9	976.5
35°	862.1	873.7	905.2	936.7	950.0
37.5°	824.0	838.9	872.1	906.9	921.8
40°	785.9	800.8	835.6	875.4	892.0
42.5°	754.4	761.0	800.8	843.9	860.5
45°	717.9	722.9	764.3	810.7	830.6
47.5°	664.8	683.1	727.8	779.2	799.1
50°	623.4	643.3	689.7	744.4	766.0
52.5°	588.6	601.8	653.2	707.9	732.8
55°	550.4	560.4	613.4	671.5	698.0
57.5°	504.0	522.2	575.3	635.0	661.5
60°	452.6	475.8	533.8	598.5	625.0
62.5°	419.5	432.7	495.7	560.4	590.2
65°	371.4	388.0	454.3	520.6	552.1
67.5°	331.6	348.2	416.1	482.5	514.0
70°	288.5	305.1	376.3	442.7	474.2
72.5°	238.7	262.0	336.6	402.9	436.0
75°	199.0	220.5	293.5	359.8	386.3
77.5°	154.2	182.4	250.3	305.1	325.0
80°	114.4	142.6	203.9	243.7	262.0
82.5°	77.9	106.1	152.5	182.4	192.3
85°	46.4	66.3	97.8	114.4	112.7
87.5°	21.6	28.2	39.8	39.8	38.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)