

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: P312862

Luminaire Tested: **22FCZ2-39HE-UNV-L83050-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: P312862
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-L83050-CP250-W2A-U-4000K
Description: 2'X2' TROFFER LED MODULE, RIBBED LENS, 0.250" POLYCARB SHEET
Light Source: (168) 4000K 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: 3457.0 lumens
Efficiency: N/A
Efficacy: 104.4 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

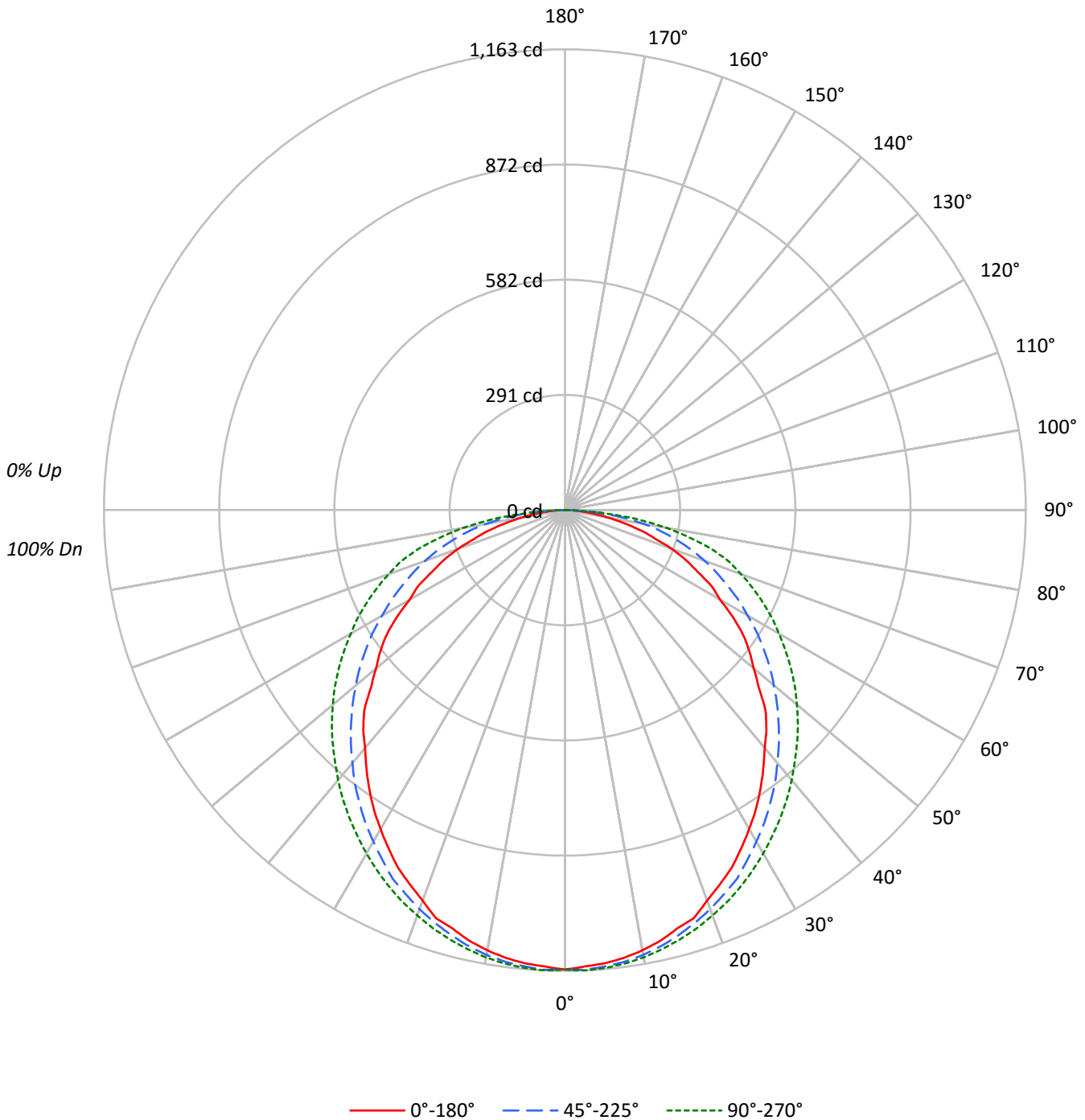
Input Watts (W): 33.1
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	3121	3121	3121
5°	3102	3124	3133
10°	3083	3115	3133
15°	3047	3093	3125
20°	3004	3070	3118
25°	2958	3051	3115
30°	2889	3003	3110
35°	2826	2968	3115
40°	2755	2929	3127
45°	2726	2903	3154
50°	2604	2882	3200
55°	2577	2872	3268
60°	2431	2868	3357
65°	2360	2887	3508
70°	2265	2955	3723
75°	2064	3045	4008
80°	1770	3154	4051
85°	1430	3013	3473



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	109.7	3.2
10°-20°	313.1	9.1
20°-30°	471.2	13.6
30°-40°	565.6	16.4
40°-50°	591.1	17.1
50°-60°	550.9	15.9
60°-70°	451.8	13.1
70°-80°	304.4	8.8
80°-90°	99.2	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°	894.1	25.9
0°-40°	1459.6	42.2
0°-60°	2601.6	75.3
0°-90°	3457.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3457.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1160	1160	1160	1160	1160	
5°	1148	1152	1156	1158	1160	109
15°	1094	1100	1110	1120	1122	309
25°	996	1003	1028	1042	1049	458
35°	860	872	903	935	948	538
45°	716	721	763	809	829	547
55°	549	559	612	670	697	487
65°	371	387	453	520	551	369
75°	198	220	293	359	386	209
85°	46	66	98	114	112	55
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1159.9	1159.9	1159.9	1159.9	1159.9
2.5°	1153.2	1156.5	1161.5	1163.2	1163.2
5°	1148.3	1151.6	1156.5	1158.2	1159.9
7.5°	1140.0	1143.3	1149.9	1153.2	1154.9
10°	1128.4	1131.7	1140.0	1145.0	1146.6
12.5°	1113.5	1116.8	1126.8	1133.4	1135.0
15°	1093.7	1100.3	1110.2	1120.1	1121.8
17.5°	1080.4	1078.8	1092.0	1103.6	1106.9
20°	1049.0	1057.3	1072.2	1085.4	1088.7
22.5°	1022.5	1029.1	1049.0	1063.9	1070.5
25°	996.1	1002.7	1027.5	1042.4	1049.0
27.5°	963.0	972.9	996.1	1017.6	1025.8
30°	929.9	939.8	966.3	991.1	1001.0
32.5°	896.8	908.4	936.5	963.0	974.5
35°	860.4	872.0	903.4	934.8	948.1
37.5°	822.3	837.2	870.3	905.0	919.9
40°	784.3	799.2	833.9	873.6	890.2
42.5°	752.8	759.4	799.2	842.2	858.7
45°	716.4	721.4	762.8	809.1	828.9
47.5°	663.5	681.7	726.4	777.6	797.5
50°	622.1	642.0	688.3	742.9	764.4
52.5°	587.4	600.6	651.9	706.5	731.3
55°	549.3	559.2	612.2	670.1	696.6
57.5°	503.0	521.2	574.1	633.7	660.2
60°	451.7	474.9	532.8	597.3	623.8
62.5°	418.6	431.8	494.7	559.2	589.0
65°	370.6	387.2	453.4	519.5	551.0
67.5°	330.9	347.5	415.3	481.5	512.9
70°	287.9	304.4	375.6	441.8	473.2
72.5°	238.3	261.4	335.9	402.1	435.2
75°	198.5	220.1	292.9	359.0	385.5
77.5°	153.9	182.0	249.8	304.4	324.3
80°	114.2	142.3	203.5	243.2	261.4
82.5°	77.8	105.9	152.2	182.0	191.9
85°	46.3	66.2	97.6	114.2	112.5
87.5°	21.5	28.1	39.7	39.7	38.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)