

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: P308830

Luminaire Tested: **22FCZ2-44HE-UNV-L82765-CA08-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: P308830
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: 22FCZ2-44HE-UNV-L82765-CA08-W2A-U-5000K
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: 4098.0 lumens
Efficiency: N/A
Efficacy: 107.6 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

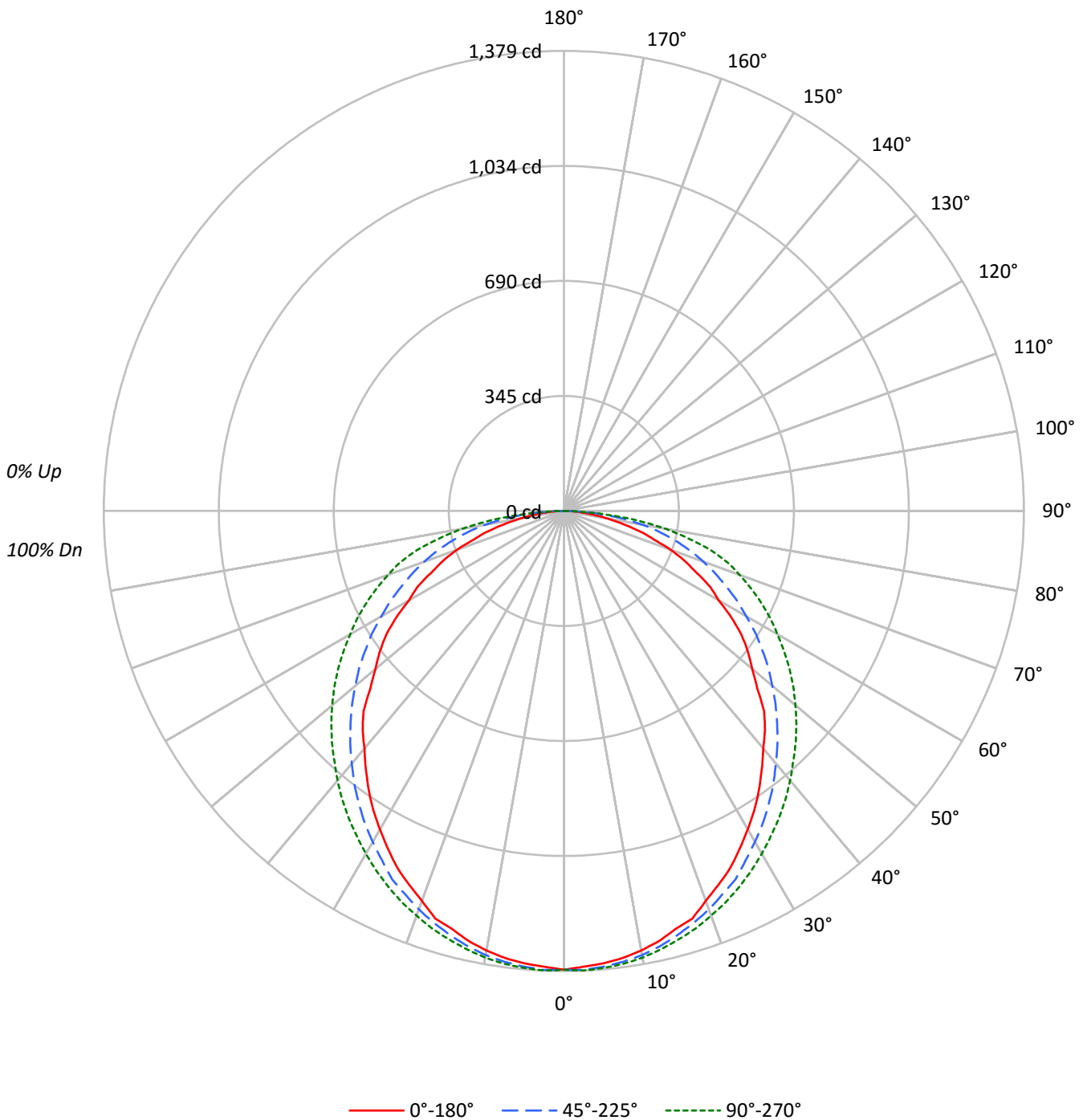
Input Watts (W): 38.1
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	3700	3700	3700
5°	3677	3703	3714
10°	3655	3693	3714
15°	3612	3667	3705
20°	3561	3640	3696
25°	3506	3616	3692
30°	3425	3559	3687
35°	3350	3518	3692
40°	3266	3472	3707
45°	3232	3441	3739
50°	3087	3416	3793
55°	3055	3405	3874
60°	2882	3399	3979
65°	2797	3422	4159
70°	2685	3503	4413
75°	2447	3610	4751
80°	2097	3738	4802
85°	1695	3572	4119



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	130.1	3.2
10°-20°	371.1	9.1
20°-30°	558.6	13.6
30°-40°	670.4	16.4
40°-50°	700.7	17.1
50°-60°	653.0	15.9
60°-70°	535.6	13.1
70°-80°	360.9	8.8
80°-90°	117.5	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°	1059.8	25.9
0°-40°	1730.2	42.2
0°-60°	3084.0	75.3
0°-90°	4098.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4098.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1375	1375	1375	1375	1375	
5°	1361	1365	1371	1373	1375	129
15°	1296	1304	1316	1328	1330	366
25°	1181	1189	1218	1236	1244	543
35°	1020	1034	1071	1108	1124	638
45°	849	855	904	959	983	649
55°	651	663	726	794	826	577
65°	439	459	537	616	653	437
75°	235	261	347	426	457	247
85°	55	78	116	135	133	65
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1374.9	1374.9	1374.9	1374.9	1374.9
2.5°	1367.1	1371.0	1376.9	1378.8	1378.8
5°	1361.2	1365.1	1371.0	1373.0	1374.9
7.5°	1351.4	1355.3	1363.1	1367.1	1369.0
10°	1337.6	1341.6	1351.4	1357.3	1359.2
12.5°	1320.0	1323.9	1335.7	1343.5	1345.5
15°	1296.5	1304.3	1316.1	1327.8	1329.8
17.5°	1280.8	1278.8	1294.5	1308.2	1312.2
20°	1243.5	1253.3	1271.0	1286.7	1290.6
22.5°	1212.1	1220.0	1243.5	1261.2	1269.0
25°	1180.7	1188.6	1218.0	1235.7	1243.5
27.5°	1141.5	1153.3	1180.7	1206.2	1216.0
30°	1102.3	1114.1	1145.4	1174.9	1186.6
32.5°	1063.1	1076.8	1110.1	1141.5	1155.2
35°	1019.9	1033.6	1070.9	1108.2	1123.9
37.5°	974.8	992.4	1031.7	1072.9	1090.5
40°	929.7	947.3	988.5	1035.6	1055.2
42.5°	892.4	900.3	947.3	998.3	1017.9
45°	849.3	855.2	904.2	959.1	982.6
47.5°	786.5	808.1	861.0	921.8	945.4
50°	737.5	761.0	815.9	880.7	906.1
52.5°	696.3	712.0	772.8	837.5	866.9
55°	651.2	662.9	725.7	794.4	825.7
57.5°	596.3	617.8	680.6	751.2	782.6
60°	535.5	562.9	631.6	708.1	739.4
62.5°	496.2	511.9	586.4	662.9	698.2
65°	439.3	459.0	537.4	615.9	653.1
67.5°	392.3	411.9	492.3	570.8	608.0
70°	341.3	360.9	445.2	523.7	560.9
72.5°	282.4	309.9	398.2	476.6	515.8
75°	235.4	260.9	347.2	425.6	457.0
77.5°	182.4	215.7	296.2	360.9	384.4
80°	135.3	168.7	241.2	288.3	309.9
82.5°	92.2	125.5	180.4	215.7	227.5
85°	54.9	78.5	115.7	135.3	133.4
87.5°	25.5	33.3	47.1	47.1	45.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)