

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: P309057

Luminaire Tested: **22FCZ2-39HE-UNV-L82765-S-CA08-W2A-U-5700K**

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: P309057
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-CA08-W2A-U-5700K
Description: 2'X2' TROFFER LED MODULE, SMOOTH 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: 3901.0 lumens
Efficiency: N/A
Efficacy: 117.1 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

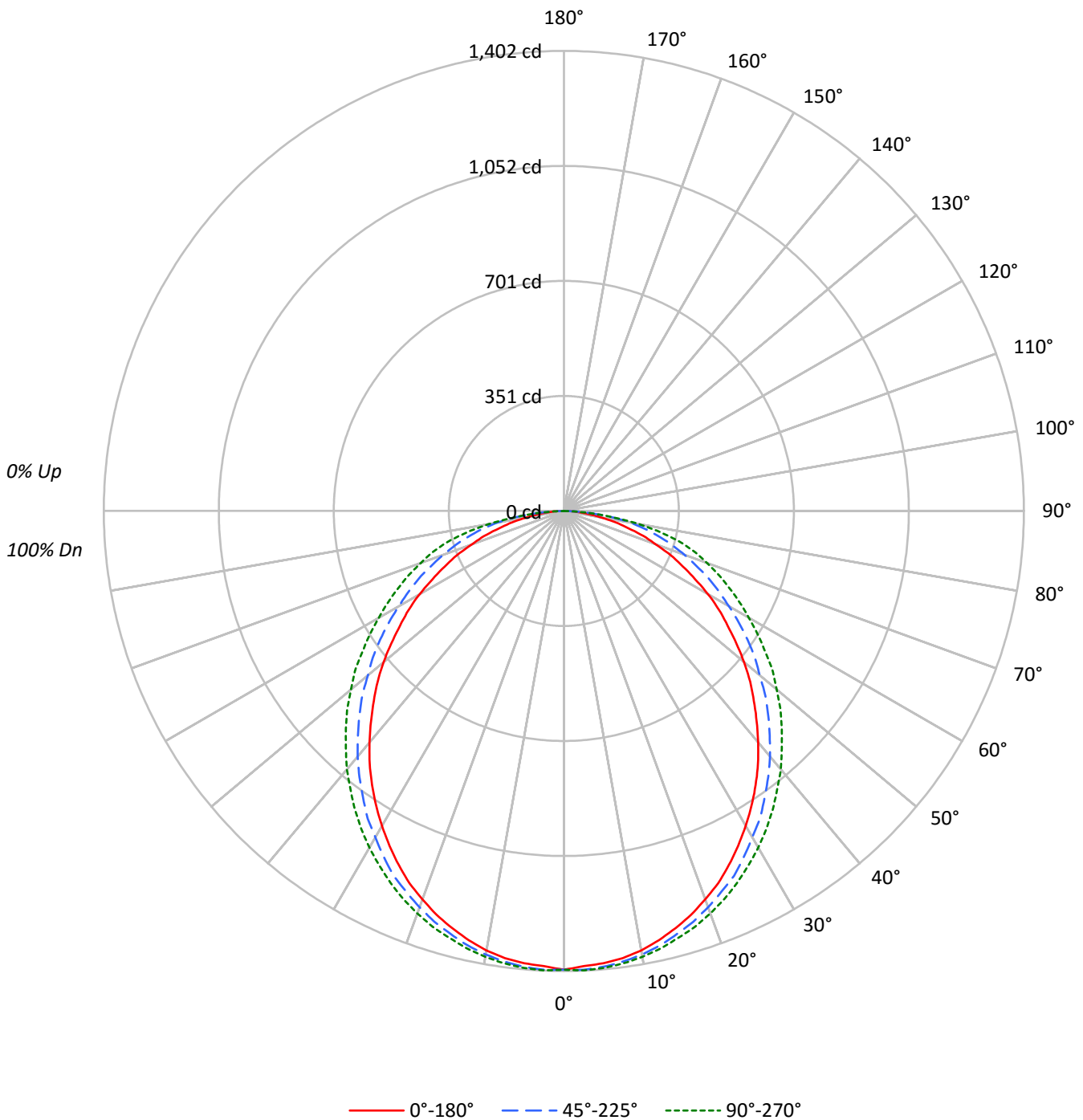
Input Watts (W): 33.3
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	3761	3761	3761
5°	3737	3766	3776
10°	3715	3750	3770
15°	3666	3717	3752
20°	3607	3680	3737
25°	3534	3643	3713
30°	3444	3569	3682
35°	3348	3504	3647
40°	3235	3433	3613
45°	3117	3352	3574
50°	3002	3261	3543
55°	2860	3202	3518
60°	2733	3125	3507
65°	2550	3106	3547
70°	2349	3079	3651
75°	2120	3122	3842
80°	1833	3216	3611
85°	1516	2699	2699



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	132.2	3.4
10°-20°	376.2	9.6
20°-30°	562.9	14.4
30°-40°	666.6	17.1
40°-50°	679.3	17.4
50°-60°	608.9	15.6
60°-70°	476.7	12.2
70°-80°	307.4	7.9
80°-90°	90.8	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°	1071.3	27.5
0°-40°	1737.9	44.5
0°-60°	3026.1	77.6
0°-90°	3901.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3901.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1398	1398	1398	1398	1398	
5°	1383	1387	1394	1396	1398	131
15°	1316	1323	1334	1345	1347	371
25°	1190	1201	1227	1243	1250	548
35°	1019	1032	1067	1099	1110	637
45°	819	837	881	926	939	633
55°	610	630	682	730	750	547
65°	400	424	488	535	557	398
75°	204	235	300	351	370	219
85°	49	67	87	87	87	58
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1397.8	1397.8	1397.8	1397.8	1397.8
2.5°	1388.7	1392.4	1399.7	1401.5	1401.5
5°	1383.3	1386.9	1394.2	1396.0	1397.8
7.5°	1374.2	1376.0	1385.1	1388.7	1390.6
10°	1359.6	1363.3	1372.4	1377.8	1379.6
12.5°	1339.6	1345.1	1356.0	1363.3	1365.1
15°	1315.9	1323.2	1334.1	1345.1	1346.9
17.5°	1290.5	1297.7	1312.3	1325.0	1328.7
20°	1259.5	1268.6	1285.0	1299.6	1305.0
22.5°	1228.6	1235.9	1255.9	1274.1	1279.5
25°	1190.4	1201.3	1226.8	1243.1	1250.4
27.5°	1150.3	1163.1	1188.5	1210.4	1217.7
30°	1108.5	1121.2	1148.5	1175.8	1184.9
32.5°	1064.8	1079.3	1112.1	1139.4	1148.5
35°	1019.3	1032.0	1066.6	1099.4	1110.3
37.5°	971.9	982.9	1022.9	1057.5	1068.4
40°	921.0	935.5	977.4	1017.4	1028.4
42.5°	870.0	886.4	928.3	971.9	982.9
45°	819.1	837.3	880.9	926.4	939.2
47.5°	769.9	784.5	833.6	877.3	895.5
50°	717.1	731.7	779.0	828.2	846.4
52.5°	662.5	682.5	733.5	780.8	802.7
55°	609.7	629.8	682.5	729.9	749.9
57.5°	560.6	577.0	631.6	680.7	700.7
60°	507.8	522.4	580.6	633.4	651.6
62.5°	451.4	473.2	533.3	582.4	604.3
65°	400.4	424.1	487.8	535.1	557.0
67.5°	353.1	374.9	436.8	487.8	511.5
70°	298.5	327.6	391.3	442.3	464.1
72.5°	254.8	280.3	345.8	396.8	420.4
75°	203.9	234.8	300.3	351.3	369.5
77.5°	162.0	192.9	254.8	294.9	304.0
80°	118.3	149.2	207.5	227.5	233.0
82.5°	80.1	109.2	149.2	154.7	156.5
85°	49.1	67.3	87.4	87.4	87.4
87.5°	23.7	27.3	30.9	29.1	29.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)