

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: P309073

Luminaire Tested: **22FCZ2-39HE-UNV-L82765-S-CP125-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: P309073
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-CP125-W2A-U-5000K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS, 0.125" POLYCARB 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: 3764.0 lumens
Efficiency: N/A
Efficacy: 113.4 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

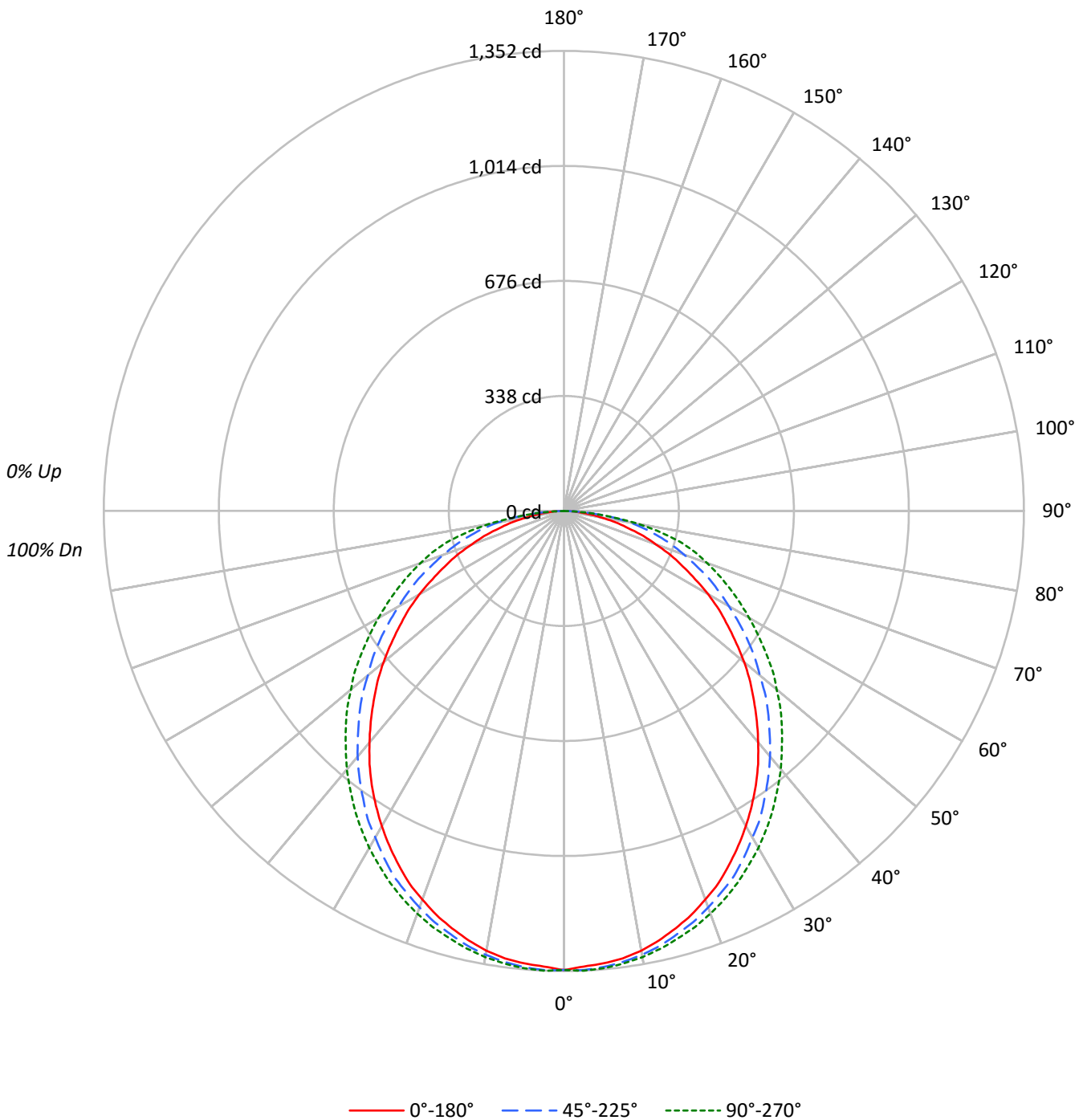
Input Watts (W): 33.2
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	3630	3630	3630
5°	3605	3634	3643
10°	3585	3618	3637
15°	3537	3586	3621
20°	3480	3551	3606
25°	3410	3515	3582
30°	3323	3443	3553
35°	3231	3381	3519
40°	3121	3313	3486
45°	3008	3235	3449
50°	2897	3147	3419
55°	2760	3090	3395
60°	2637	3015	3384
65°	2460	2997	3422
70°	2266	2971	3523
75°	2045	3013	3707
80°	1770	3102	3484
85°	1463	2603	2603



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	127.5	3.4
10°-20°	363.0	9.6
20°-30°	543.1	14.4
30°-40°	643.2	17.1
40°-50°	655.5	17.4
50°-60°	587.5	15.6
60°-70°	460.0	12.2
70°-80°	296.6	7.9
80°-90°	87.6	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°	1033.7	27.5
0°-40°	1676.8	44.5
0°-60°	2919.8	77.6
0°-90°	3764.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3764.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1349	1349	1349	1349	1349	
5°	1335	1338	1345	1347	1349	127
15°	1270	1277	1287	1298	1300	358
25°	1149	1159	1184	1200	1206	529
35°	984	996	1029	1061	1071	615
45°	790	808	850	894	906	610
55°	588	608	659	704	724	527
65°	386	409	471	516	537	384
75°	197	226	290	339	356	211
85°	47	65	84	84	84	56
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1348.8	1348.8	1348.8	1348.8	1348.8
2.5°	1340.0	1343.5	1350.5	1352.3	1352.3
5°	1334.7	1338.2	1345.2	1347.0	1348.8
7.5°	1325.9	1327.7	1336.5	1340.0	1341.7
10°	1311.9	1315.4	1324.2	1329.4	1331.2
12.5°	1292.6	1297.8	1308.4	1315.4	1317.1
15°	1269.7	1276.8	1287.3	1297.8	1299.6
17.5°	1245.1	1252.2	1266.2	1278.5	1282.0
20°	1215.3	1224.1	1239.9	1253.9	1259.2
22.5°	1185.4	1192.5	1211.8	1229.3	1234.6
25°	1148.6	1159.1	1183.7	1199.5	1206.5
27.5°	1109.9	1122.2	1146.8	1167.9	1174.9
30°	1069.5	1081.8	1108.2	1134.5	1143.3
32.5°	1027.4	1041.4	1073.0	1099.4	1108.2
35°	983.5	995.8	1029.1	1060.7	1071.3
37.5°	937.8	948.3	987.0	1020.3	1030.9
40°	888.6	902.7	943.1	981.7	992.3
42.5°	839.5	855.3	895.7	937.8	948.3
45°	790.3	807.9	850.0	893.9	906.2
47.5°	742.9	756.9	804.3	846.5	864.0
50°	691.9	706.0	751.7	799.1	816.6
52.5°	639.3	658.6	707.7	753.4	774.5
55°	588.3	607.6	658.6	704.2	723.6
57.5°	540.9	556.7	609.4	656.8	676.1
60°	490.0	504.0	560.2	611.2	628.7
62.5°	435.5	456.6	514.6	562.0	583.1
65°	386.4	409.2	470.7	516.3	537.4
67.5°	340.7	361.8	421.5	470.7	493.5
70°	288.0	316.1	377.6	426.8	447.8
72.5°	245.9	270.5	333.7	382.9	405.7
75°	196.7	226.5	289.8	338.9	356.5
77.5°	156.3	186.2	245.9	284.5	293.3
80°	114.2	144.0	200.2	219.5	224.8
82.5°	77.3	105.4	144.0	149.3	151.0
85°	47.4	65.0	84.3	84.3	84.3
87.5°	22.8	26.3	29.9	28.1	28.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)