

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: P309097

Luminaire Tested: **22FCZ2-44HE-UNV-L82765-S-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: P309097
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: 22FCZ2-44HE-UNV-L82765-S-CA08-W2A-U-3500K
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: 4098.9 lumens
Efficiency: N/A
Efficacy: 109.6 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

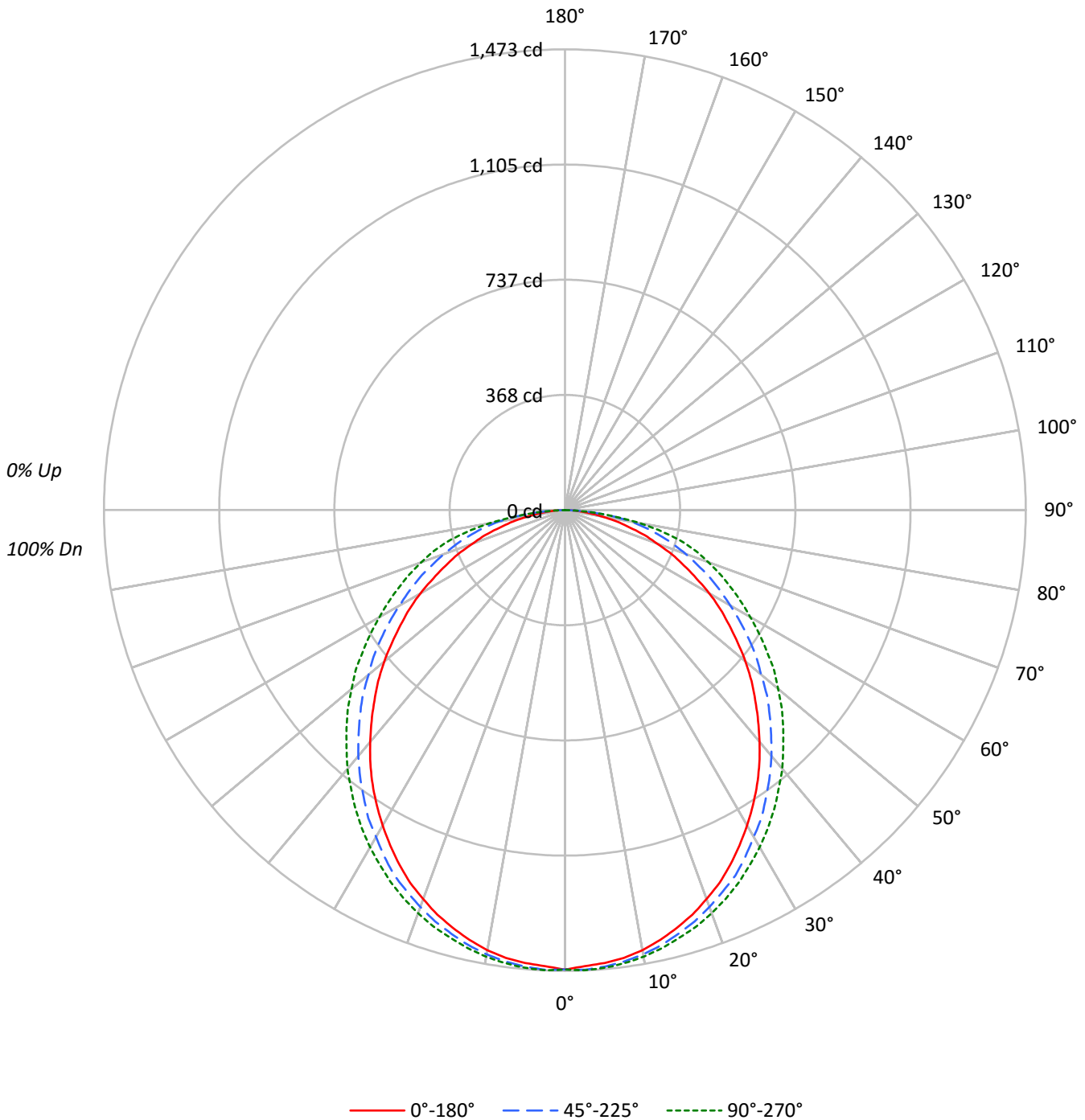
Input Watts (W): 37.4
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P309097

CATALOG NUMBER: 22FCZ2-44HE-UNV-L82765-S-CA08-W2A-U-3500K

Luminous Intensity Polar Plot





TEST NUMBER: P309097

CATALOG NUMBER: 22FCZ2-44HE-UNV-L82765-S-CA08-W2A-U-3500K

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°	3953	3953	3953
5°	3926	3957	3968
10°	3904	3940	3961
15°	3852	3906	3943
20°	3790	3867	3927
25°	3714	3827	3901
30°	3619	3750	3869
35°	3518	3682	3832
40°	3399	3608	3796
45°	3275	3522	3755
50°	3154	3427	3723
55°	3006	3365	3696
60°	2872	3284	3685
65°	2679	3263	3726
70°	2467	3235	3837
75°	2227	3281	4036
80°	1926	3378	3794
85°	1593	2834	2834



TEST NUMBER: P309097

CATALOG NUMBER: 22FCZ2-44HE-UNV-L82765-S-CA08-W2A-U-3500K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	138.9	3.4
10°-20°	395.3	9.6
20°-30°	591.5	14.4
30°-40°	700.4	17.1
40°-50°	713.8	17.4
50°-60°	639.8	15.6
60°-70°	500.9	12.2
70°-80°	323.0	7.9
80°-90°	95.4	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°	1125.6	27.5
0°-40°	1826.1	44.5
0°-60°	3179.7	77.6
0°-90°	4098.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4098.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1469	1469	1469	1469	1469	
5°	1454	1457	1465	1467	1469	138
15°	1383	1390	1402	1413	1415	390
25°	1251	1262	1289	1306	1314	576
35°	1071	1084	1121	1155	1167	669
45°	861	880	926	974	987	665
55°	641	662	717	767	788	574
65°	421	446	512	562	585	418
75°	214	247	316	369	388	230
85°	52	71	92	92	92	61
90°	0	0	0	0	0	



TEST NUMBER: P309097

CATALOG NUMBER: 22FCZ2-44HE-UNV-L82765-S-CA08-W2A-U-3500K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1468.8	1468.8	1468.8	1468.8	1468.8
2.5°	1459.2	1463.1	1470.7	1472.6	1472.6
5°	1453.5	1457.3	1465.0	1466.9	1468.8
7.5°	1443.9	1445.8	1455.4	1459.2	1461.1
10°	1428.6	1432.5	1442.0	1447.8	1449.7
12.5°	1407.6	1413.3	1424.8	1432.5	1434.4
15°	1382.7	1390.4	1401.9	1413.3	1415.2
17.5°	1356.0	1363.6	1378.9	1392.3	1396.1
20°	1323.4	1333.0	1350.2	1365.5	1371.3
22.5°	1290.9	1298.6	1319.6	1338.7	1344.5
25°	1250.8	1262.2	1289.0	1306.2	1313.9
27.5°	1208.7	1222.1	1248.9	1271.8	1279.5
30°	1164.7	1178.1	1206.8	1235.5	1245.0
32.5°	1118.8	1134.1	1168.5	1197.2	1206.8
35°	1071.0	1084.4	1120.7	1155.1	1166.6
37.5°	1021.3	1032.7	1074.8	1111.2	1122.6
40°	967.7	983.0	1027.0	1069.1	1080.6
42.5°	914.2	931.4	975.4	1021.3	1032.7
45°	860.6	879.7	925.6	973.5	986.8
47.5°	809.0	824.3	875.9	921.8	940.9
50°	753.5	768.8	818.5	870.2	889.3
52.5°	696.1	717.2	770.7	820.5	843.4
55°	640.7	661.7	717.2	766.9	787.9
57.5°	589.0	606.3	663.6	715.3	736.3
60°	533.6	548.9	610.1	665.5	684.7
62.5°	474.3	497.2	560.4	612.0	634.9
65°	420.7	445.6	512.5	562.3	585.2
67.5°	371.0	394.0	459.0	512.5	537.4
70°	313.6	344.2	411.2	464.7	487.7
72.5°	267.7	294.5	363.4	416.9	441.8
75°	214.2	246.7	315.6	369.1	388.2
77.5°	170.2	202.7	267.7	309.8	319.4
80°	124.3	156.8	218.0	239.1	244.8
82.5°	84.1	114.7	156.8	162.6	164.5
85°	51.6	70.8	91.8	91.8	91.8
87.5°	24.9	28.7	32.5	30.6	30.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)