

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: P309103

Luminaire Tested: **22FCZ2-44HE-UNV-L82765-S-CA08-W2A-U-6500K**

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: P309103
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-6500K
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: 4387.0 lumens
Efficiency: N/A
Efficacy: 112.8 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

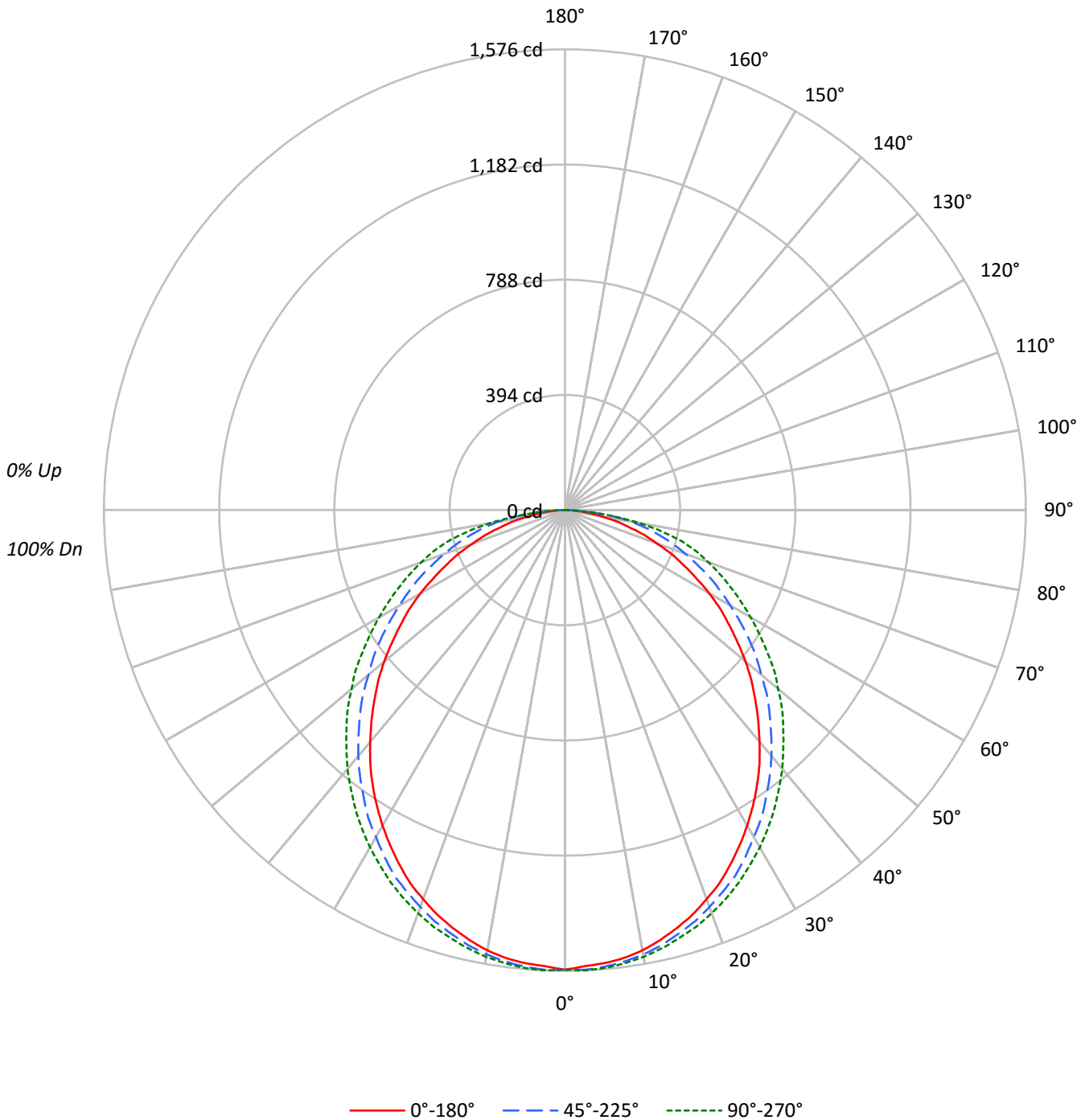
Input Watts (W): 38.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	4230	4230	4230
5°	4202	4235	4246
10°	4178	4217	4239
15°	4123	4180	4220
20°	4056	4138	4203
25°	3975	4096	4175
30°	3873	4013	4140
35°	3765	3940	4102
40°	3638	3861	4063
45°	3505	3770	4019
50°	3376	3668	3985
55°	3217	3601	3956
60°	3074	3514	3944
65°	2867	3493	3988
70°	2641	3463	4107
75°	2383	3511	4320
80°	2061	3615	4060
85°	1707	3032	3032



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	148.7	3.4
10°-20°	423.1	9.6
20°-30°	633.0	14.4
30°-40°	749.6	17.1
40°-50°	764.0	17.4
50°-60°	684.7	15.6
60°-70°	536.1	12.2
70°-80°	345.7	7.9
80°-90°	102.1	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°	1204.7	27.5
0°-40°	1954.4	44.5
0°-60°	3403.1	77.6
0°-90°	4387.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4387.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1572	1572	1572	1572	1572	
5°	1556	1560	1568	1570	1572	148
15°	1480	1488	1500	1513	1515	417
25°	1339	1351	1380	1398	1406	616
35°	1146	1161	1200	1236	1249	716
45°	921	942	991	1042	1056	711
55°	686	708	768	821	843	615
65°	450	477	549	602	626	447
75°	229	264	338	395	416	246
85°	55	76	98	98	98	65
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1572.0	1572.0	1572.0	1572.0	1572.0
2.5°	1561.8	1565.9	1574.0	1576.1	1576.1
5°	1555.6	1559.7	1567.9	1570.0	1572.0
7.5°	1545.4	1547.4	1557.7	1561.8	1563.8
10°	1529.0	1533.1	1543.3	1549.5	1551.5
12.5°	1506.5	1512.6	1524.9	1533.1	1535.2
15°	1479.9	1488.1	1500.4	1512.6	1514.7
17.5°	1451.2	1459.4	1475.8	1490.1	1494.2
20°	1416.4	1426.7	1445.1	1461.5	1467.6
22.5°	1381.6	1389.8	1412.3	1432.8	1439.0
25°	1338.7	1350.9	1379.6	1398.0	1406.2
27.5°	1293.6	1308.0	1336.6	1361.2	1369.4
30°	1246.5	1260.9	1291.6	1322.3	1332.5
32.5°	1197.4	1213.8	1250.6	1281.3	1291.6
35°	1146.2	1160.6	1199.5	1236.3	1248.6
37.5°	1093.0	1105.3	1150.3	1189.2	1201.5
40°	1035.7	1052.1	1099.2	1144.2	1156.5
42.5°	978.4	996.8	1043.9	1093.0	1105.3
45°	921.1	941.6	990.7	1041.9	1056.2
47.5°	865.8	882.2	937.5	986.6	1007.1
50°	806.5	822.8	876.1	931.3	951.8
52.5°	745.1	767.6	824.9	878.1	902.7
55°	685.7	708.2	767.6	820.8	843.3
57.5°	630.4	648.9	710.3	765.5	788.0
60°	571.1	587.5	653.0	712.3	732.8
62.5°	507.6	532.2	599.7	655.0	679.6
65°	450.3	476.9	548.6	601.8	626.3
67.5°	397.1	421.7	491.2	548.6	575.2
70°	335.7	368.4	440.1	497.4	522.0
72.5°	286.6	315.2	388.9	446.2	472.8
75°	229.2	264.0	337.7	395.0	415.5
77.5°	182.2	217.0	286.6	331.6	341.8
80°	133.0	167.8	233.3	255.9	262.0
82.5°	90.1	122.8	167.8	174.0	176.0
85°	55.3	75.7	98.2	98.2	98.2
87.5°	26.6	30.7	34.8	32.7	32.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)