

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: P310580

Luminaire Tested: **24FCZ2-35HE-UNV-L82765-CA08-W2A-U-2700K**

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: P310580
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-15)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24FCZ2-35HE-UNV-L82765-CA08-W2A-U-2700K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.08" ACRYLIC SHEET
Light Source: (336) 2700K 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: 2952.0 lumens
Efficiency: N/A
Efficacy: 113.5 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.29 / 1.38
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

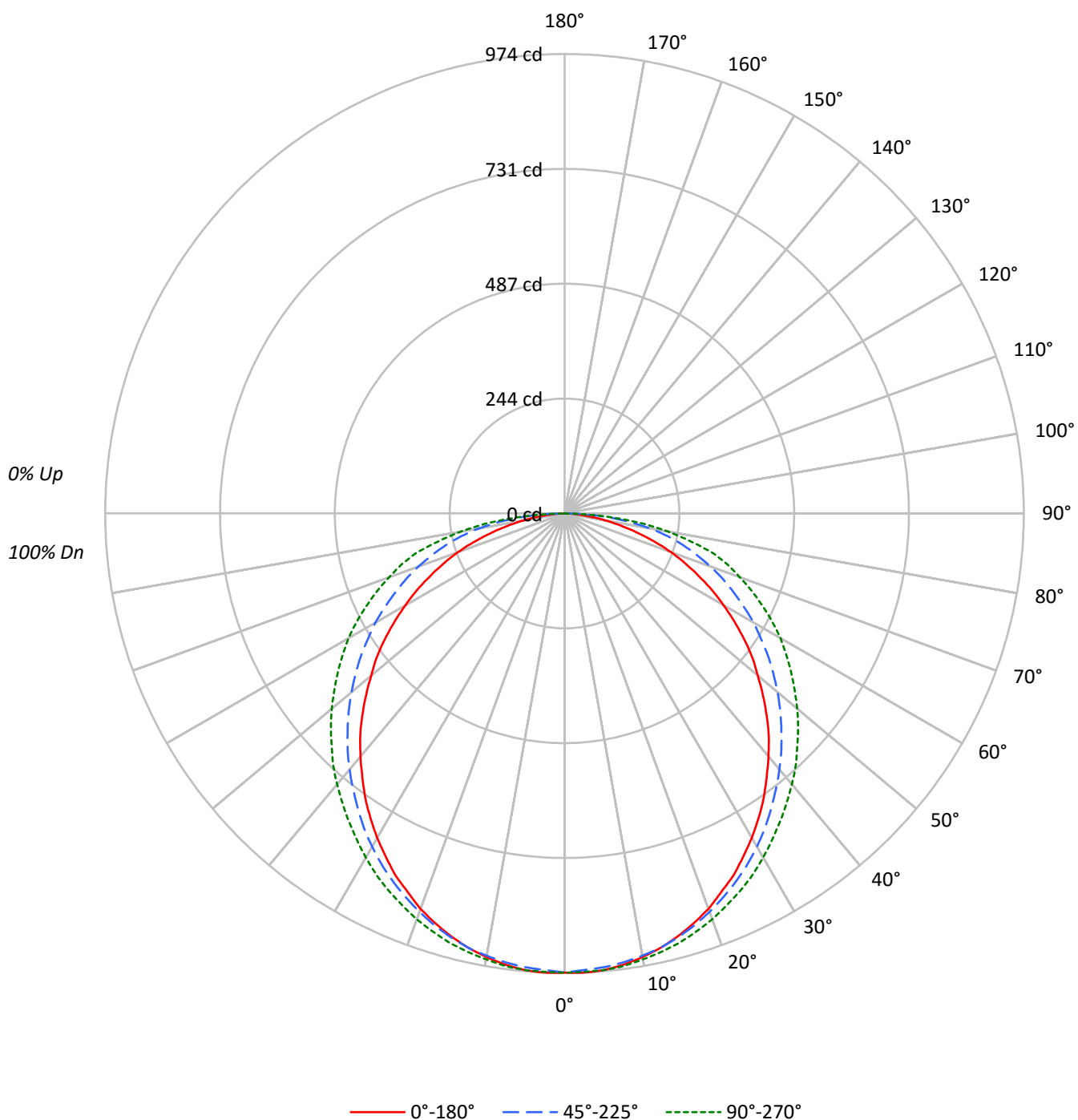
Input Watts (W): 26
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				0
RW	70	50	30	10	70	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		100
1	108	103	98	94	105	100	96	92	96	92	89		92	89	87		82
2	98	89	81	75	95	87	80	74	83	78	73		80	75	71		67
3	89	77	69	62	86	76	68	61	73	66	60		70	64	59		56
4	81	68	59	52	79	67	58	52	64	57	51		62	56	50		47
5	74	61	52	45	72	60	51	44	58	50	44		56	49	43		41
6	69	55	46	39	67	54	45	39	52	44	38		50	43	38		36
7	64	50	41	34	62	49	40	34	47	39	34		46	39	34		31
8	59	45	37	31	57	45	36	30	43	36	30		42	35	30		28
9	55	41	33	27	54	41	33	27	40	32	27		39	32	27		25
10	52	38	30	25	50	38	30	25	37	30	25		36	29	25		23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1310	1310	1310
5°	1312	1304	1312
10°	1305	1301	1311
15°	1293	1296	1312
20°	1278	1287	1311
25°	1258	1278	1310
30°	1234	1268	1309
35°	1210	1255	1309
40°	1182	1245	1318
45°	1154	1237	1329
50°	1119	1234	1349
55°	1091	1236	1376
60°	1049	1247	1423
65°	1001	1260	1475
70°	948	1299	1557
75°	845	1354	1700
80°	721	1434	1738
85°	514	1422	1663



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	92.1	3.1
10°-20°	263.4	8.9
20°-30°	397.9	13.5
30°-40°	479.6	16.2
40°-50°	503.5	17.1
50°-60°	471.0	16.0
60°-70°	389.0	13.2
70°-80°	265.1	9.0
80°-90°	90.4	3.1
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°	753.5	25.5
0°-40°	1233.1	41.8
0°-60°	2207.6	74.8
0°-90°	2952.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2952.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	974	974	974	974	974	
5°	972	971	966	972	972	92
15°	928	930	930	940	942	262
25°	847	851	861	878	882	390
35°	736	744	764	789	797	460
45°	606	619	650	686	698	468
55°	465	484	527	570	587	415
65°	314	341	396	446	463	312
75°	163	200	260	310	327	173
85°	33	66	92	104	108	42
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	973.5	973.5	973.5	973.5	973.5
2.5°	974.5	973.5	968.6	973.5	972.6
5°	971.6	970.6	965.7	971.6	971.6
7.5°	964.7	964.7	959.8	966.7	967.7
10°	954.9	954.9	952.0	959.8	959.8
12.5°	943.2	943.2	943.2	951.0	952.0
15°	928.5	929.5	930.4	940.2	942.2
17.5°	910.9	912.8	915.8	927.5	929.5
20°	892.3	894.2	899.1	912.8	915.8
22.5°	868.7	873.6	880.5	896.2	899.1
25°	847.2	851.1	860.9	877.6	882.5
27.5°	820.8	826.6	839.4	857.0	863.8
30°	794.3	800.2	815.9	836.4	842.3
32.5°	765.9	774.7	791.4	812.9	819.8
35°	736.5	744.4	763.9	789.4	797.2
37.5°	704.2	715.0	736.5	763.9	773.7
40°	672.9	684.6	709.1	738.5	750.2
42.5°	641.5	653.3	680.7	714.0	725.8
45°	606.3	619.0	650.3	685.6	698.3
47.5°	571.0	586.7	621.0	658.2	671.9
50°	534.8	552.4	589.6	628.8	644.5
52.5°	502.4	519.1	558.3	600.4	615.1
55°	465.2	483.8	526.9	570.0	586.7
57.5°	427.0	447.6	493.6	540.6	557.3
60°	389.8	412.3	463.3	510.3	528.9
62.5°	353.6	376.1	429.0	478.0	496.6
65°	314.4	340.8	395.7	445.6	463.3
67.5°	277.2	305.6	363.4	412.3	430.0
70°	240.9	268.4	330.1	378.1	395.7
72.5°	201.8	233.1	294.8	344.8	363.4
75°	162.6	199.8	260.5	309.5	327.1
77.5°	126.3	164.5	225.3	265.4	274.2
80°	93.0	132.2	185.1	213.5	224.3
82.5°	59.7	98.9	141.0	161.6	170.4
85°	33.3	65.6	92.1	103.8	107.7
87.5°	13.7	28.4	37.2	42.1	42.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)