

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: P313861

Luminaire Tested: **24FCZ2-35HE-UNV-L83050-CP250-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: P313861
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-L83050-CP250-W2A-U-3500K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.250" POLYCARB SHEET
Light Source: (336) 3500K 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: 2986.0 lumens
Efficiency: N/A
Efficacy: 114.8 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.29 / 1.38
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

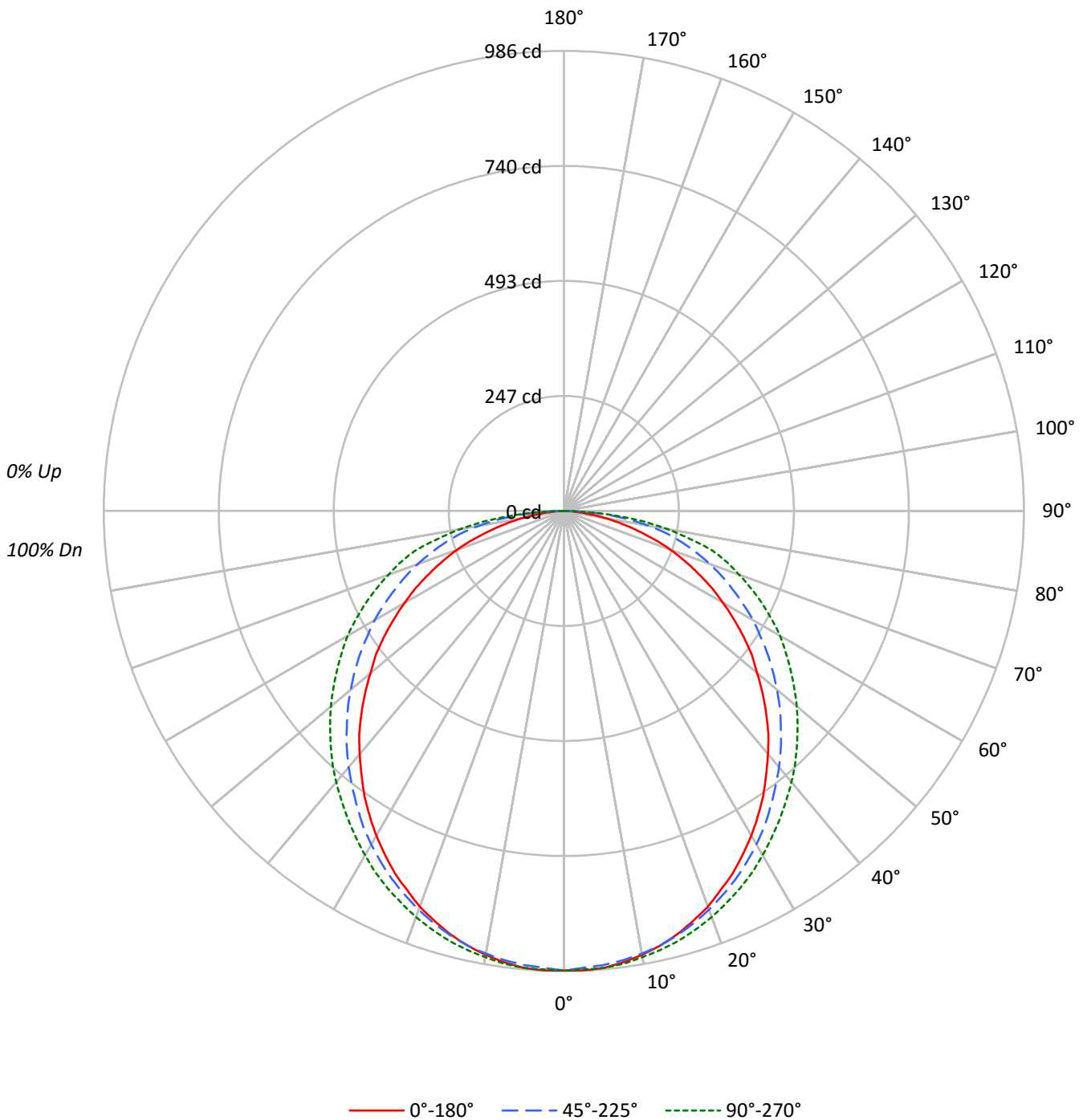
Input Watts (W): 26
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	50	30	10	0	
RCR																						
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100				100
1	108	103	98	94	105	100	96	92	96	92	89	92	89	87	88	86	84	82				82
2	98	89	81	75	95	87	80	74	83	78	73	80	75	71	77	73	69	67				67
3	89	77	69	62	86	76	68	61	73	66	60	70	64	59	67	62	58	56				56
4	81	68	59	52	79	67	58	52	64	57	51	62	56	50	60	54	50	47				47
5	74	61	52	45	72	60	51	44	58	50	44	56	49	43	54	48	43	41				41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36				36
7	64	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31				31
8	59	45	37	31	57	45	36	30	43	36	30	42	35	30	41	34	30	28				28
9	55	41	33	27	54	41	33	27	40	32	27	39	32	27	38	31	27	25				25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	25	35	29	24	23				23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1325	1325	1325
5°	1327	1319	1327
10°	1320	1316	1326
15°	1308	1311	1328
20°	1292	1302	1326
25°	1272	1293	1325
30°	1248	1282	1324
35°	1224	1269	1325
40°	1195	1260	1333
45°	1167	1252	1344
50°	1132	1248	1365
55°	1104	1250	1392
60°	1061	1261	1440
65°	1012	1274	1492
70°	959	1314	1574
75°	855	1370	1720
80°	729	1450	1758
85°	520	1437	1683



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	93.2	3.1
10°-20°	266.5	8.9
20°-30°	402.5	13.5
30°-40°	485.1	16.2
40°-50°	509.3	17.1
50°-60°	476.5	16.0
60°-70°	393.5	13.2
70°-80°	268.1	9.0
80°-90°	91.4	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°	762.2	25.5
0°-40°	1247.3	41.8
0°-60°	2233.0	74.8
0°-90°	2986.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2986.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	985	985	985	985	985	
5°	983	982	977	983	983	93
15°	939	940	941	951	953	265
25°	857	861	871	888	893	394
35°	745	753	773	798	806	466
45°	613	626	658	694	706	473
55°	471	489	533	577	593	420
65°	318	345	400	451	469	315
75°	164	202	264	313	331	175
85°	34	66	93	105	109	42
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	984.8	984.8	984.8	984.8	984.8
2.5°	985.7	984.8	979.8	984.8	983.8
5°	982.8	981.8	976.8	982.8	982.8
7.5°	975.8	975.8	970.9	977.8	978.8
10°	965.9	965.9	963.0	970.9	970.9
12.5°	954.0	954.0	954.0	962.0	963.0
15°	939.2	940.2	941.2	951.1	953.1
17.5°	921.4	923.3	926.3	938.2	940.2
20°	902.5	904.5	909.5	923.3	926.3
22.5°	878.8	883.7	890.6	906.5	909.5
25°	857.0	860.9	870.8	887.7	892.6
27.5°	830.2	836.2	849.0	866.9	873.8
30°	803.5	809.4	825.3	846.1	852.0
32.5°	774.7	783.6	800.5	822.3	829.2
35°	745.0	752.9	772.7	798.5	806.4
37.5°	712.3	723.2	745.0	772.7	782.7
40°	680.6	692.5	717.3	747.0	758.9
42.5°	648.9	660.8	688.5	722.2	734.1
45°	613.2	626.1	657.8	693.5	706.4
47.5°	577.6	593.4	628.1	665.8	679.6
50°	540.9	558.8	596.4	636.0	651.9
52.5°	508.2	525.1	564.7	607.3	622.2
55°	470.6	489.4	533.0	576.6	593.4
57.5°	431.9	452.8	499.3	546.9	563.7
60°	394.3	417.1	468.6	516.2	535.0
62.5°	357.6	380.4	433.9	483.5	502.3
65°	318.0	344.8	400.2	450.8	468.6
67.5°	280.4	309.1	367.6	417.1	434.9
70°	243.7	271.5	333.9	382.4	400.2
72.5°	204.1	235.8	298.2	348.7	367.6
75°	164.5	202.1	263.5	313.1	330.9
77.5°	127.8	166.4	227.9	268.5	277.4
80°	94.1	133.7	187.2	216.0	226.9
82.5°	60.4	100.1	142.7	163.5	172.4
85°	33.7	66.4	93.1	105.0	109.0
87.5°	13.9	28.7	37.6	42.6	42.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)