

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: P311297

Luminaire Tested: **24FCZ2-35HE-UNV-L82765-S-CP250-W2A-U-5500K**

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: P311297
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-1)
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-S-CP250-W2A-U-5500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.250" POLYCARB SHEET
Light Source: (336) 5500K 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: 3262.0 lumens
Efficiency: N/A
Efficacy: 122.2 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

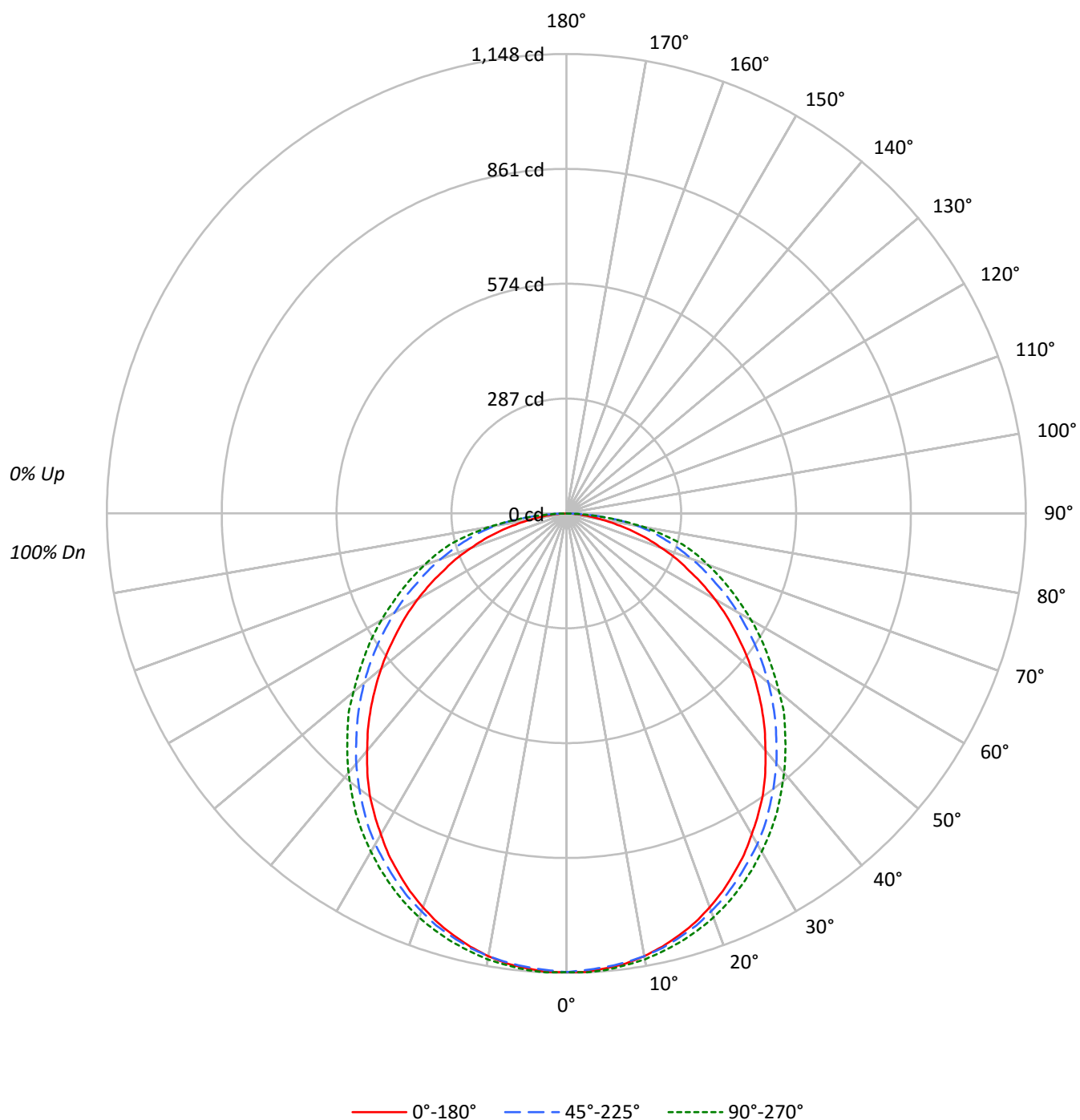
Input Watts (W): 26.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	99	95	106	101	97	93	97	93	90		93	90	88		83
2	98	90	83	77	96	88	81	76	84	79	74		81	76	72		69
3	89	79	70	64	87	77	69	63	74	67	62		71	66	61		58
4	82	70	61	54	80	68	60	54	66	59	53		63	57	52		49
5	75	62	53	46	73	61	53	46	59	51	46		57	50	45		42
6	70	56	47	40	68	55	47	40	53	46	40		52	45	40		37
7	64	51	42	36	63	50	42	36	48	41	35		47	40	35		33
8	60	46	38	32	58	46	37	32	44	37	32		43	36	31		29
9	56	43	34	29	55	42	34	29	41	34	28		40	33	28		26
10	53	39	31	26	51	39	31	26	38	31	26		37	30	26		24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1542	1542	1542
5°	1541	1537	1546
10°	1535	1535	1546
15°	1520	1527	1543
20°	1500	1515	1539
25°	1472	1500	1529
30°	1439	1483	1516
35°	1407	1459	1504
40°	1359	1434	1487
45°	1315	1406	1471
50°	1265	1379	1453
55°	1208	1354	1439
60°	1151	1333	1436
65°	1079	1309	1445
70°	999	1317	1484
75°	894	1341	1567
80°	723	1421	1533
85°	543	1247	1215



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	108.5	3.3
10°-20°	310.0	9.5
20°-30°	466.0	14.3
30°-40°	555.1	17.0
40°-50°	568.1	17.4
50°-60°	511.5	15.7
60°-70°	401.6	12.3
70°-80°	260.7	8.0
80°-90°	80.6	2.5
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°	884.5	27.1
0°-40°	1439.5	44.1
0°-60°	2519.1	77.2
0°-90°	3262.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3262.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1146	1146	1146	1146	1146	
5°	1141	1143	1138	1144	1145	108
15°	1091	1094	1096	1106	1108	308
25°	992	1000	1010	1027	1030	457
35°	857	867	888	910	916	535
45°	691	708	739	767	773	533
55°	515	538	577	607	613	462
65°	339	365	411	446	454	337
75°	172	205	258	293	302	182
85°	35	65	81	79	79	43
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1146.0	1146.0	1146.0	1146.0	1146.0
2.5°	1147.0	1147.0	1141.8	1147.0	1148.0
5°	1140.8	1142.9	1137.7	1143.9	1144.9
7.5°	1134.6	1134.6	1131.5	1137.7	1138.7
10°	1123.2	1124.2	1123.2	1130.4	1131.5
12.5°	1108.7	1110.7	1111.8	1119.0	1120.1
15°	1091.0	1094.2	1096.2	1105.6	1107.6
17.5°	1071.4	1074.5	1079.6	1090.0	1092.1
20°	1047.5	1051.7	1057.9	1071.4	1074.5
22.5°	1021.6	1025.8	1036.1	1048.6	1053.7
25°	991.6	999.9	1010.2	1026.8	1029.9
27.5°	961.5	968.8	982.3	999.9	1004.0
30°	926.3	937.7	954.3	971.9	976.0
32.5°	892.1	903.5	923.2	941.8	947.0
35°	856.9	867.2	888.0	909.7	915.9
37.5°	816.5	829.9	852.7	874.5	880.7
40°	774.0	790.6	816.5	839.3	846.5
42.5°	733.6	751.2	777.1	802.0	810.3
45°	691.1	707.7	738.8	766.7	773.0
47.5°	647.6	666.2	699.4	727.4	737.7
50°	604.1	623.8	659.0	688.0	694.2
52.5°	560.5	581.3	618.6	649.7	652.8
55°	515.0	537.8	577.1	607.2	613.4
57.5°	473.5	493.2	535.7	566.8	574.0
60°	427.9	449.7	495.3	524.3	533.6
62.5°	384.4	407.2	454.9	483.9	492.2
65°	338.8	364.7	411.3	445.5	453.8
67.5°	299.4	324.3	374.0	407.2	415.5
70°	253.9	281.8	334.7	368.9	377.2
72.5°	214.5	243.5	296.3	329.5	341.9
75°	172.0	205.2	258.0	293.2	301.5
77.5°	130.6	168.9	222.8	249.7	249.7
80°	93.3	133.7	183.4	195.8	197.9
82.5°	61.1	100.5	135.7	134.7	134.7
85°	35.2	65.3	80.8	78.7	78.7
87.5°	13.5	26.9	29.0	29.0	28.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)