

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: P313862

Luminaire Tested: **24FCZ2-35HE-UNV-L83050-CP250-W2A-U-4000K**

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: P313862
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-4000K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.250" POLYCARB SHEET
Light Source: (336) 4000K 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: 3135.0 lumens
Efficiency: N/A
Efficacy: 117.9 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

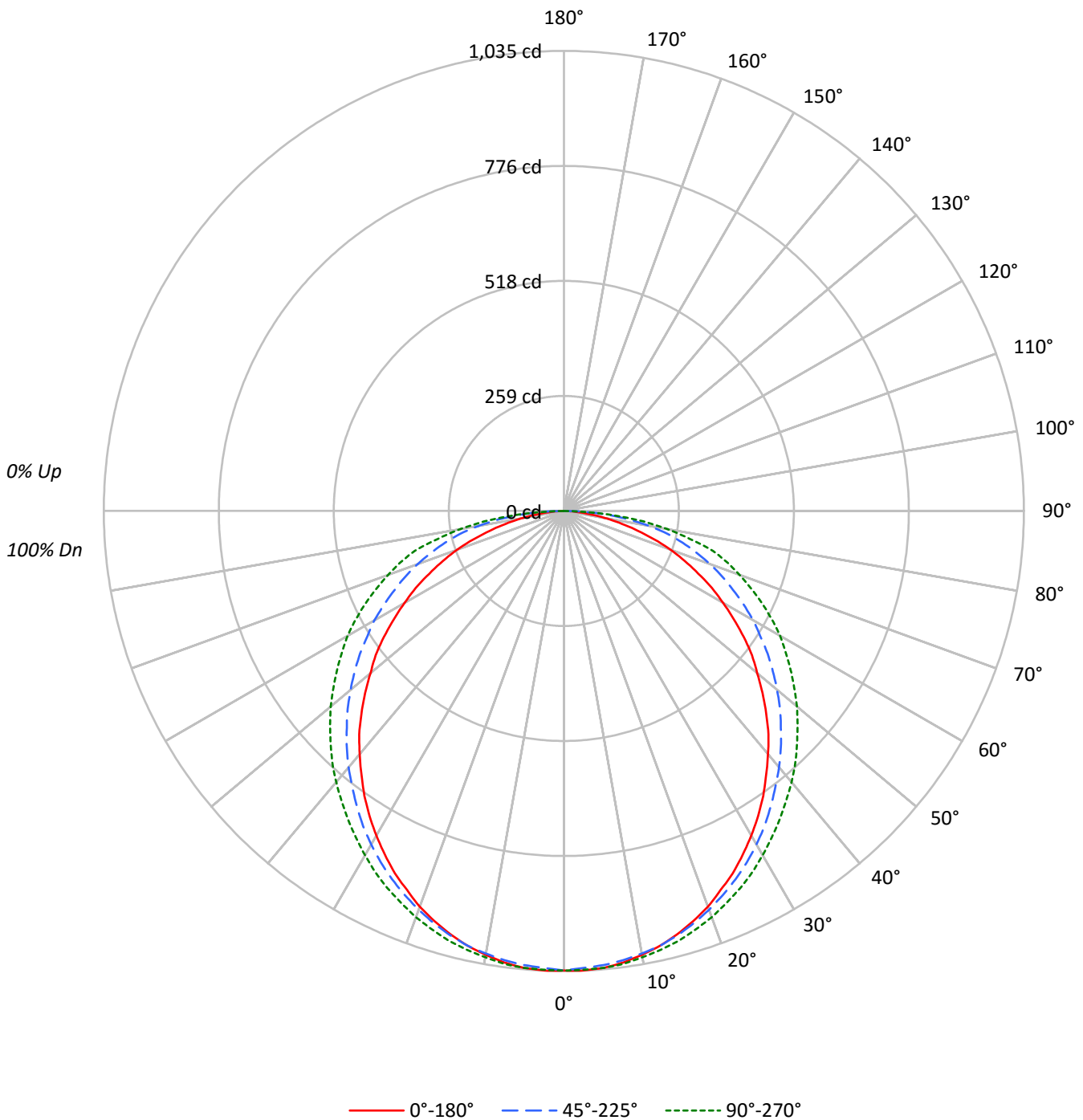
Input Watts (W): 26.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1391	1391	1391
5°	1394	1385	1394
10°	1386	1381	1393
15°	1373	1376	1394
20°	1357	1367	1392
25°	1336	1357	1391
30°	1311	1346	1390
35°	1285	1333	1391
40°	1255	1323	1399
45°	1225	1314	1411
50°	1189	1311	1433
55°	1159	1313	1461
60°	1114	1324	1512
65°	1063	1338	1566
70°	1007	1379	1653
75°	898	1438	1806
80°	766	1523	1846
85°	546	1510	1766



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	97.8	3.1
10°-20°	279.8	8.9
20°-30°	422.6	13.5
30°-40°	509.3	16.2
40°-50°	534.7	17.1
50°-60°	500.2	16.0
60°-70°	413.1	13.2
70°-80°	281.5	9.0
80°-90°	96.0	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°	800.2	25.5
0°-40°	1309.5	41.8
0°-60°	2344.4	74.8
0°-90°	3135.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3135.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1034	1034	1034	1034	1034	
5°	1032	1031	1026	1032	1032	98
15°	986	987	988	998	1001	278
25°	900	904	914	932	937	414
35°	782	790	811	838	847	489
45°	644	657	691	728	742	497
55°	494	514	560	605	623	441
65°	334	362	420	473	492	331
75°	173	212	277	329	347	184
85°	35	70	98	110	114	44
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1033.9	1033.9	1033.9	1033.9	1033.9
2.5°	1034.9	1033.9	1028.7	1033.9	1032.9
5°	1031.8	1030.8	1025.6	1031.8	1031.8
7.5°	1024.5	1024.5	1019.3	1026.6	1027.7
10°	1014.1	1014.1	1011.0	1019.3	1019.3
12.5°	1001.7	1001.7	1001.7	1010.0	1011.0
15°	986.0	987.1	988.1	998.5	1000.6
17.5°	967.3	969.4	972.5	985.0	987.1
20°	947.6	949.6	954.8	969.4	972.5
22.5°	922.6	927.8	935.1	951.7	954.8
25°	899.7	903.9	914.3	932.0	937.2
27.5°	871.6	877.9	891.4	910.1	917.4
30°	843.6	849.8	866.4	888.3	894.5
32.5°	813.4	822.7	840.4	863.3	870.6
35°	782.2	790.5	811.3	838.4	846.7
37.5°	747.9	759.3	782.2	811.3	821.7
40°	714.6	727.1	753.1	784.3	796.7
42.5°	681.3	693.8	722.9	758.3	770.7
45°	643.8	657.4	690.7	728.1	741.6
47.5°	606.4	623.0	659.4	699.0	713.5
50°	567.9	586.6	626.2	667.8	684.4
52.5°	533.6	551.3	592.9	637.6	653.2
55°	494.1	513.8	559.6	605.4	623.0
57.5°	453.5	475.3	524.2	574.2	591.8
60°	414.0	437.9	492.0	541.9	561.7
62.5°	375.5	399.4	455.6	507.6	527.3
65°	333.9	362.0	420.2	473.3	492.0
67.5°	294.4	324.5	385.9	437.9	456.6
70°	255.9	285.0	350.5	401.5	420.2
72.5°	214.3	247.6	313.1	366.1	385.9
75°	172.7	212.2	276.7	328.7	347.4
77.5°	134.2	174.7	239.2	281.9	291.2
80°	98.8	140.4	196.6	226.7	238.2
82.5°	63.4	105.1	149.8	171.6	181.0
85°	35.4	69.7	97.8	110.3	114.4
87.5°	14.6	30.2	39.5	44.7	44.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)