

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: P313100

Luminaire Tested: **24FCZ2-35HE-UNV-L83050-HRP-CP125-W2A-U-3000K**

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: P313100
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-20)
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-HRP-CP125-W2A-U-3000K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.125" POLYCARB SHEET
Light Source: (336) 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: 2308.0 lumens
Efficiency: N/A
Efficacy: 89.1 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.3 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

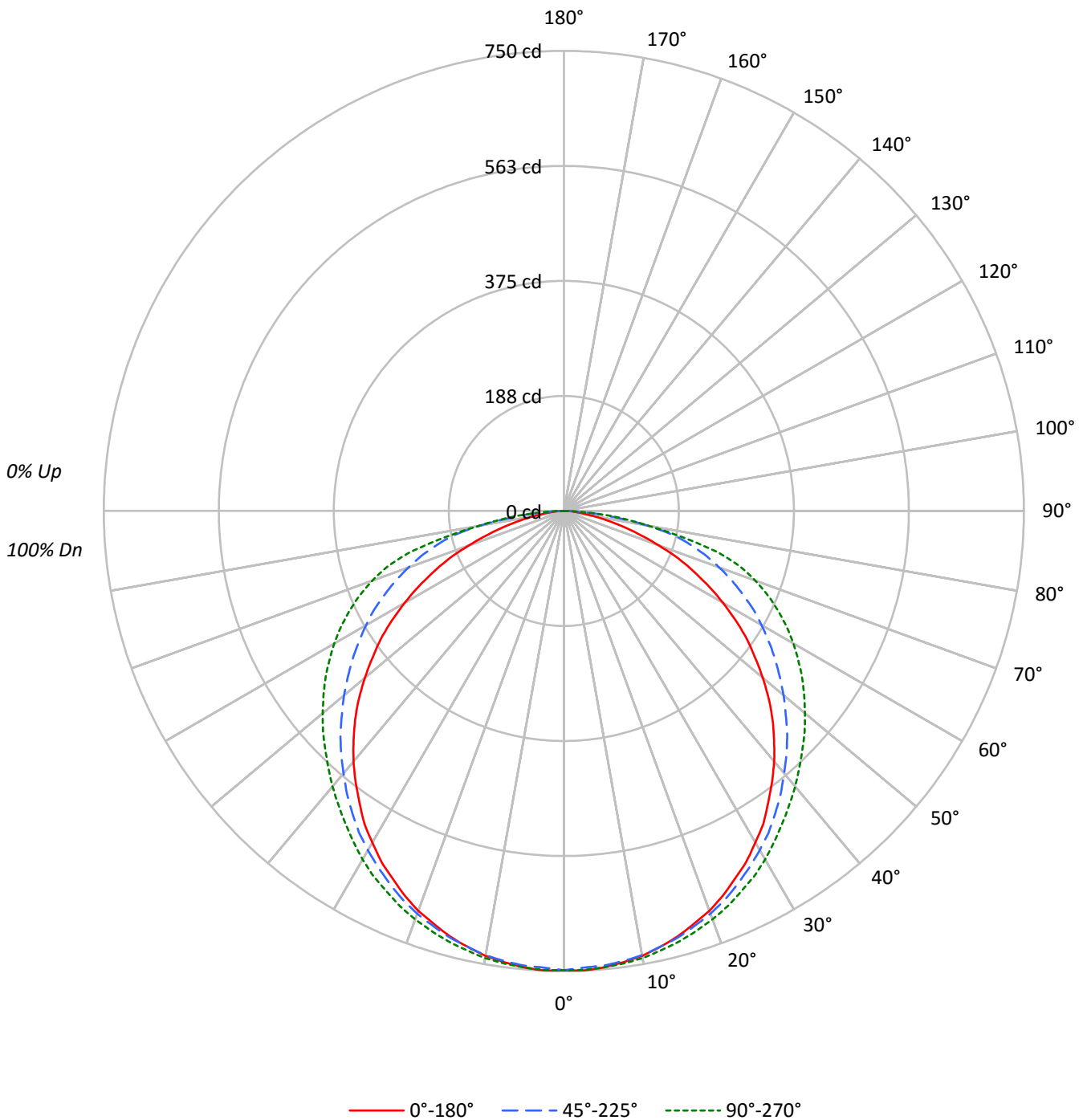
Input Watts (W): 25.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				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	101	96	93	96	93	90	92	90	87	89	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	59	68	63	58	56
4	81	68	59	52	79	67	59	52	65	57	51	62	56	50	60	54	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36
7	63	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	36	30	57	44	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	24	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1008	1008	1008
5°	1009	1005	1009
10°	1006	1005	1011
15°	1000	1003	1012
20°	993	1000	1014
25°	981	996	1016
30°	970	992	1019
35°	954	987	1021
40°	937	981	1030
45°	916	980	1046
50°	886	979	1074
55°	855	986	1113
60°	806	1001	1162
65°	744	1025	1227
70°	650	1061	1308
75°	528	1115	1351
80°	389	1093	1093
85°	298	806	909



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	70.9	3.1
10°-20°	203.7	8.8
20°-30°	310.1	13.4
30°-40°	376.6	16.3
40°-50°	397.8	17.2
50°-60°	375.4	16.3
60°-70°	312.1	13.5
70°-80°	205.4	8.9
80°-90°	56.0	2.4
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°	584.8	25.3
0°-40°	961.3	41.7
0°-60°	1734.6	75.2
0°-90°	2308.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2308.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	749	749	749	749	749	
5°	747	747	744	747	747	71
15°	718	719	720	727	727	202
25°	661	665	671	682	684	305
35°	581	588	601	616	621	364
45°	481	491	515	540	550	371
55°	364	380	420	460	474	324
65°	234	261	322	369	386	231
75°	102	148	214	254	260	109
85°	19	42	52	58	59	24
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	748.8	748.8	748.8	748.8	748.8
2.5°	749.8	748.8	745.0	748.8	748.8
5°	746.9	746.9	744.0	746.9	746.9
7.5°	742.1	742.1	740.1	744.0	744.0
10°	736.3	736.3	735.3	740.1	740.1
12.5°	727.6	728.5	727.6	733.4	733.4
15°	717.9	718.9	719.8	726.6	726.6
17.5°	705.4	707.3	709.2	716.9	717.9
20°	693.8	694.7	698.6	707.3	708.3
22.5°	678.3	681.2	686.0	694.7	697.6
25°	660.9	664.8	670.6	682.2	684.1
27.5°	644.5	647.4	655.1	667.7	671.5
30°	624.2	629.0	638.7	651.2	656.1
32.5°	604.9	609.7	621.3	634.8	638.7
35°	580.7	587.5	601.0	616.5	621.3
37.5°	557.5	564.3	580.7	598.1	603.9
40°	533.4	541.1	558.5	578.8	586.5
42.5°	507.3	517.9	537.2	559.5	568.1
45°	481.2	490.8	515.0	540.1	549.8
47.5°	453.2	464.8	490.8	520.8	532.4
50°	423.2	437.7	467.7	500.5	513.1
52.5°	393.3	409.7	443.5	480.2	493.7
55°	364.3	379.7	420.3	459.9	474.4
57.5°	332.4	351.7	396.2	438.7	453.2
60°	299.5	320.8	372.0	416.4	431.9
62.5°	266.7	290.8	348.8	393.3	409.7
65°	233.8	260.9	321.8	369.1	385.5
67.5°	201.9	231.9	296.6	344.0	360.4
70°	165.2	202.9	269.6	316.0	332.4
72.5°	131.4	174.9	243.5	287.0	301.5
75°	101.5	147.8	214.5	254.1	259.9
77.5°	74.4	120.8	184.6	198.1	199.0
80°	50.2	96.6	141.1	139.1	141.1
82.5°	32.9	72.5	88.9	99.5	100.5
85°	19.3	42.5	52.2	58.0	58.9
87.5°	9.7	14.5	18.4	19.3	21.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)