

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: P313579

Luminaire Tested: **24FCZ2-45HE-UNV-L83050-RDP-CP125-W2A-U-5000K**

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: P313579
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-19)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24FCZ2-45HE-UNV-L83050-RDP-CP125-W2A-U-5000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.125" POLYCARB SHEET
Light Source: (336) 5000K 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: 2856.0 lumens
Efficiency: N/A
Efficacy: 80.4 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

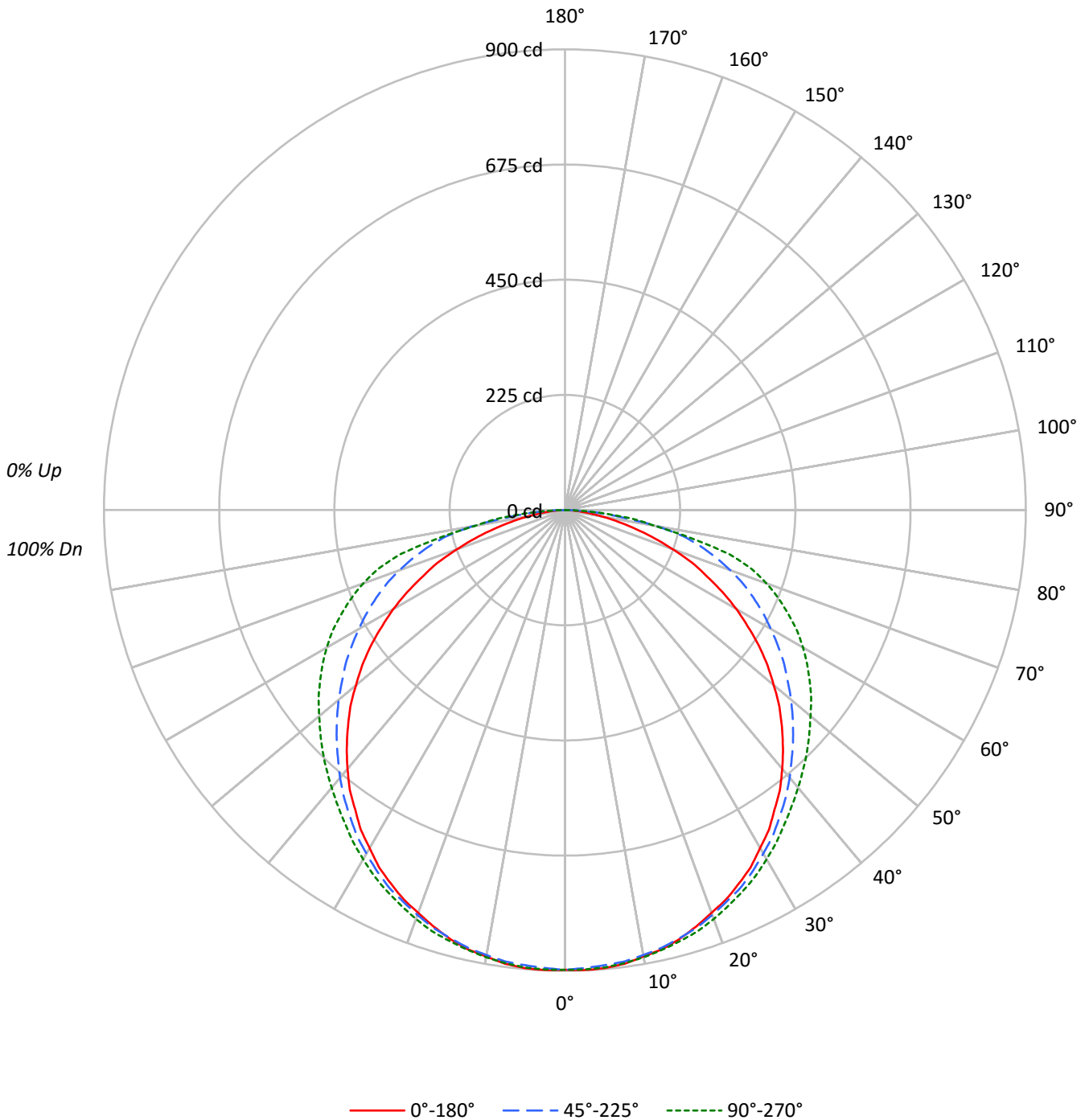
Input Watts (W): 35.5
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	100	96	92	96	93	89	92	89	87	88	86	84	82
2	97	89	81	75	95	87	80	74	83	77	72	80	75	71	77	73	69	67
3	88	77	68	62	86	76	68	61	72	66	60	70	64	59	67	62	58	56
4	81	68	59	52	78	67	58	51	64	57	51	62	55	50	59	54	49	47
5	74	60	51	44	72	59	51	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	45	38	51	44	38	50	43	37	48	42	37	35
7	63	49	40	34	61	48	40	34	47	39	33	45	38	33	44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30	41	34	29	40	34	29	27
9	55	41	33	27	53	40	32	27	39	32	27	38	31	26	37	31	26	24
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1208	1208	1208
5°	1213	1205	1211
10°	1210	1206	1212
15°	1208	1206	1214
20°	1199	1205	1217
25°	1194	1207	1220
30°	1184	1204	1224
35°	1173	1201	1229
40°	1159	1199	1244
45°	1140	1200	1272
50°	1115	1207	1311
55°	1087	1226	1369
60°	1041	1250	1445
65°	974	1294	1533
70°	886	1354	1650
75°	751	1429	1723
80°	593	1438	1394
85°	437	1093	1224



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	85.2	3.0
10°-20°	245.2	8.6
20°-30°	375.0	13.1
30°-40°	458.4	16.0
40°-50°	488.5	17.1
50°-60°	467.1	16.4
60°-70°	395.7	13.9
70°-80°	265.9	9.3
80°-90°	75.0	2.6
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°	705.3	24.7
0°-40°	1163.7	40.7
0°-60°	2119.3	74.2
0°-90°	2856.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2856.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	898	898	898	898	898	
5°	898	897	892	897	897	85
15°	867	867	866	873	871	244
25°	805	808	813	820	822	371
35°	714	720	731	745	748	447
45°	599	609	630	657	669	462
55°	463	480	523	564	584	413
65°	306	337	407	460	482	304
75°	144	197	275	322	332	155
85°	28	58	71	76	79	35
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	898.1	898.1	898.1	898.1	898.1
2.5°	899.5	899.5	895.3	898.1	898.1
5°	898.1	896.7	892.5	896.7	896.7
7.5°	893.9	892.5	889.6	893.9	892.5
10°	885.4	885.4	882.5	886.8	886.8
12.5°	878.3	876.9	875.5	881.1	879.7
15°	867.0	867.0	865.5	872.6	871.2
17.5°	852.8	854.2	855.6	861.3	862.7
20°	837.2	840.0	841.5	850.0	850.0
22.5°	823.1	824.5	827.3	835.8	835.8
25°	804.6	807.5	813.1	820.2	821.6
27.5°	786.2	787.6	794.7	804.6	806.1
30°	762.1	766.4	774.9	786.2	787.6
32.5°	740.9	745.1	755.1	766.4	769.2
35°	714.0	719.6	731.0	745.1	748.0
37.5°	689.9	694.1	708.3	723.9	728.1
40°	660.1	668.6	682.8	701.2	708.3
42.5°	630.4	638.9	655.9	680.0	688.5
45°	599.2	609.1	630.4	657.3	668.6
47.5°	568.1	579.4	603.5	634.6	647.4
50°	532.6	546.8	576.6	612.0	626.1
52.5°	498.6	515.6	548.2	587.9	606.3
55°	463.2	480.2	522.7	563.8	583.6
57.5°	423.6	446.2	493.0	539.7	561.0
60°	386.7	408.0	464.6	515.6	536.9
62.5°	347.1	375.4	436.3	490.1	511.4
65°	306.0	337.2	406.6	460.4	481.6
67.5°	269.2	303.2	376.8	430.6	451.9
70°	225.2	267.7	344.2	398.1	419.3
72.5°	184.2	230.9	310.2	362.7	382.5
75°	144.5	196.9	274.8	321.6	331.5
77.5°	107.7	162.9	238.0	257.8	250.7
80°	76.5	130.3	185.6	175.7	179.9
82.5°	49.6	99.2	114.7	130.3	134.6
85°	28.3	58.1	70.8	76.5	79.3
87.5°	12.7	21.2	28.3	28.3	26.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)