

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: P313848

Luminaire Tested: **24FCZ2-35HE-UNV-L83050-CA125-W2A-U-4500K**

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: P313848
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-CA125-W2A-U-4500K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.125" ACRYLIC SHEET
Light Source: (336) 4500K 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: 3398.0 lumens
Efficiency: N/A
Efficacy: 124.5 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

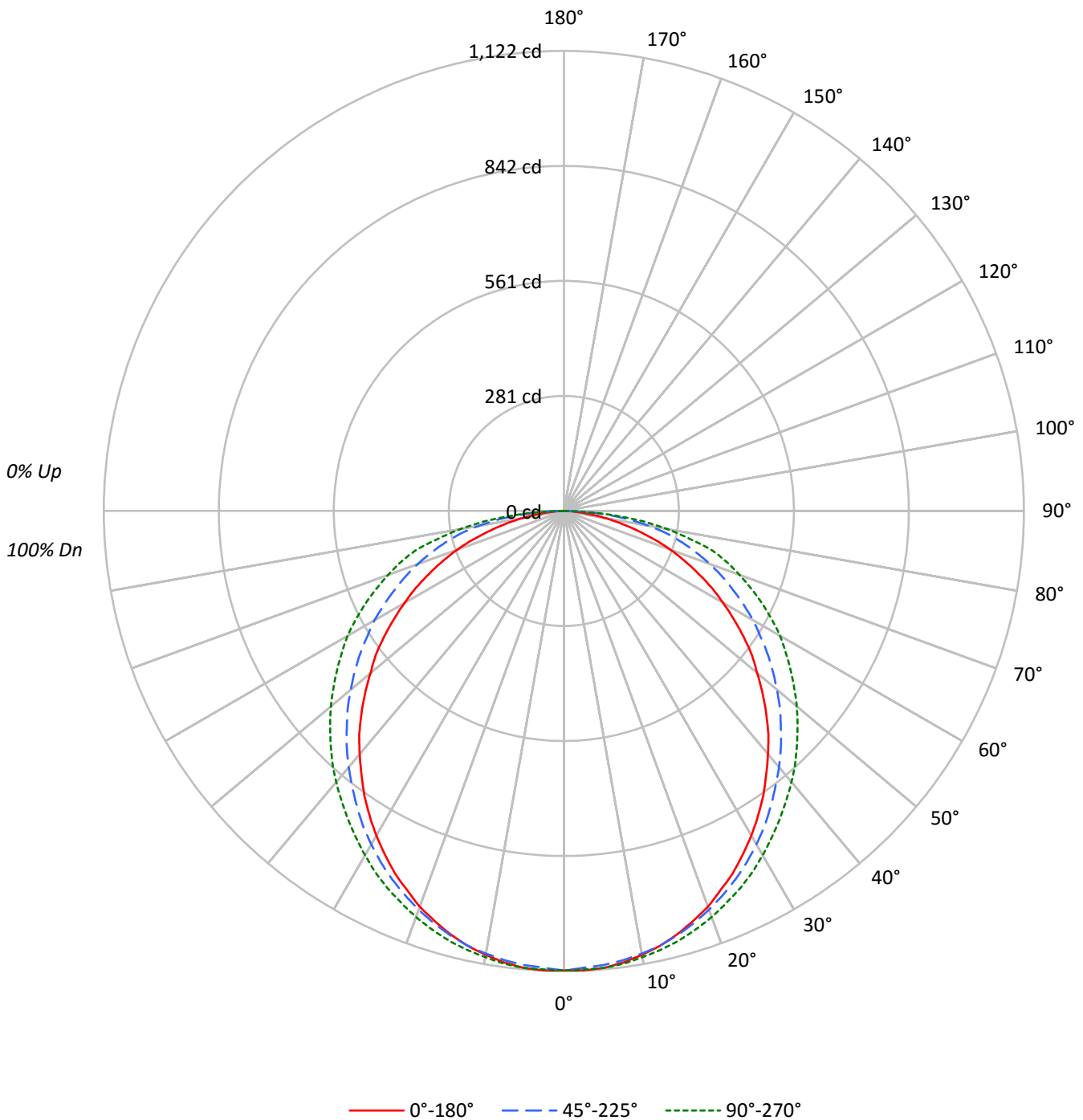
Input Watts (W): 27.3
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1508	1508	1508
5°	1511	1501	1511
10°	1502	1497	1509
15°	1489	1492	1511
20°	1471	1482	1509
25°	1448	1471	1508
30°	1420	1459	1506
35°	1393	1444	1507
40°	1360	1434	1517
45°	1328	1424	1529
50°	1289	1421	1553
55°	1256	1423	1584
60°	1207	1435	1638
65°	1152	1450	1698
70°	1091	1495	1792
75°	973	1559	1958
80°	830	1651	2001
85°	591	1636	1914



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	106.1	3.1
10°-20°	303.2	8.9
20°-30°	458.0	13.5
30°-40°	552.0	16.2
40°-50°	579.5	17.1
50°-60°	542.2	16.0
60°-70°	447.8	13.2
70°-80°	305.1	9.0
80°-90°	104.1	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°	867.3	25.5
0°-40°	1419.4	41.8
0°-60°	2541.1	74.8
0°-90°	3398.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3398.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1121	1121	1121	1121	1121	
5°	1118	1117	1112	1118	1118	106
15°	1069	1070	1071	1082	1085	301
25°	975	980	991	1010	1016	449
35°	848	857	879	909	918	530
45°	698	712	749	789	804	538
55°	536	557	606	656	675	478
65°	362	392	456	513	533	359
75°	187	230	300	356	377	200
85°	38	76	106	120	124	48
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1120.6	1120.6	1120.6	1120.6	1120.6
2.5°	1121.8	1120.6	1115.0	1120.6	1119.5
5°	1118.4	1117.2	1111.6	1118.4	1118.4
7.5°	1110.5	1110.5	1104.8	1112.7	1113.9
10°	1099.2	1099.2	1095.8	1104.8	1104.8
12.5°	1085.7	1085.7	1085.7	1094.7	1095.8
15°	1068.8	1069.9	1071.0	1082.3	1084.6
17.5°	1048.5	1050.7	1054.1	1067.6	1069.9
20°	1027.1	1029.3	1034.9	1050.7	1054.1
22.5°	1000.0	1005.6	1013.5	1031.6	1034.9
25°	975.2	979.7	991.0	1010.1	1015.8
27.5°	944.8	951.5	966.2	986.5	994.4
30°	914.3	921.1	939.1	962.8	969.6
32.5°	881.6	891.8	910.9	935.7	943.6
35°	847.8	856.8	879.4	908.7	917.7
37.5°	810.6	823.0	847.8	879.4	890.6
40°	774.5	788.0	816.2	850.1	863.6
42.5°	738.4	752.0	783.5	821.9	835.4
45°	697.9	712.5	748.6	789.2	803.8
47.5°	657.3	675.3	714.8	757.6	773.4
50°	615.6	635.9	678.7	723.8	741.8
52.5°	578.4	597.5	642.6	691.1	708.0
55°	535.5	556.9	606.5	656.1	675.3
57.5°	491.5	515.2	568.2	622.3	641.5
60°	448.7	474.6	533.3	587.4	608.8
62.5°	407.0	432.9	493.8	550.2	571.6
65°	361.9	392.3	455.5	513.0	533.3
67.5°	319.1	351.7	418.3	474.6	494.9
70°	277.3	308.9	379.9	435.2	455.5
72.5°	232.2	268.3	339.3	396.8	418.3
75°	187.1	230.0	299.9	356.3	376.6
77.5°	145.4	189.4	259.3	305.5	315.7
80°	107.1	152.2	213.1	245.8	258.2
82.5°	68.8	113.9	162.3	186.0	196.2
85°	38.3	75.5	106.0	119.5	124.0
87.5°	15.8	32.7	42.8	48.5	48.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)