

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: P309436

Luminaire Tested: **24FCZ2-45HE-UNV-L82765-HRP-CP125-W2A-U-6500K**

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: P309436
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: 24FCZ2-45HE-UNV-L82765-HRP-CP125-W2A-U-6500K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.125" POLYCARB SHEET
Light Source: (336) 6500K 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: 3177.0 lumens
Efficiency: N/A
Efficacy: 90.0 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

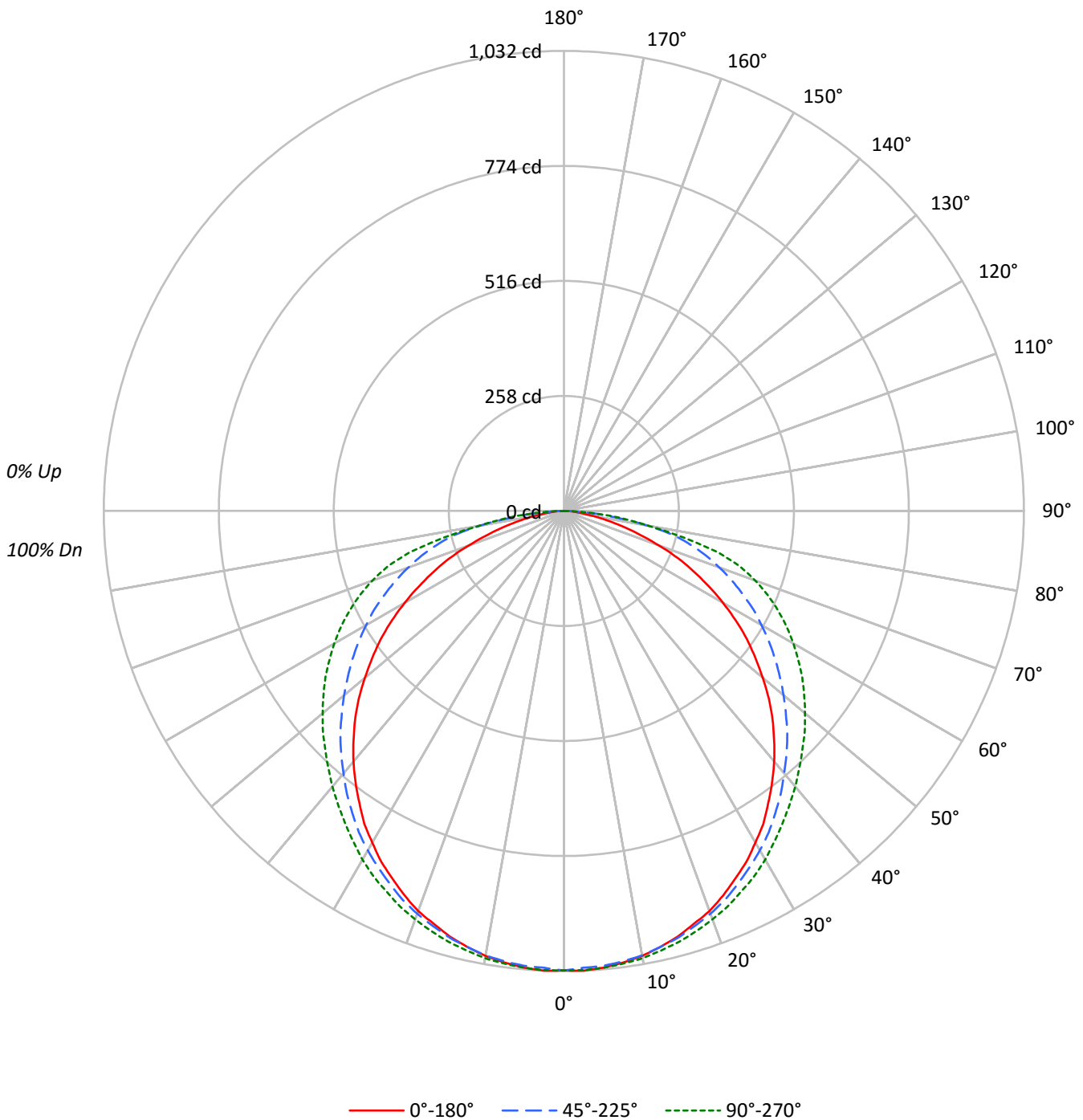
Input Watts (W): 35.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1387	1387	1387
5°	1389	1383	1389
10°	1385	1383	1392
15°	1377	1380	1393
20°	1367	1377	1396
25°	1351	1370	1398
30°	1335	1366	1403
35°	1313	1359	1405
40°	1290	1350	1418
45°	1260	1349	1440
50°	1220	1347	1478
55°	1176	1357	1532
60°	1109	1378	1600
65°	1025	1410	1690
70°	895	1460	1800
75°	726	1535	1860
80°	536	1505	1505
85°	411	1108	1252



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	97.6	3.1
10°-20°	280.4	8.8
20°-30°	426.9	13.4
30°-40°	518.3	16.3
40°-50°	547.6	17.2
50°-60°	516.7	16.3
60°-70°	429.6	13.5
70°-80°	282.7	8.9
80°-90°	77.1	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°	804.9	25.3
0°-40°	1323.3	41.7
0°-60°	2387.6	75.2
0°-90°	3177.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3177.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1031	1031	1031	1031	1031	
5°	1028	1028	1024	1028	1028	98
15°	988	990	991	1000	1000	279
25°	910	915	923	939	942	420
35°	799	809	827	849	855	500
45°	662	676	709	744	757	510
55°	501	523	579	633	653	447
65°	322	359	443	508	531	318
75°	140	204	295	350	358	150
85°	27	58	72	80	81	33
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1030.8	1030.8	1030.8	1030.8	1030.8
2.5°	1032.1	1030.8	1025.5	1030.8	1030.8
5°	1028.1	1028.1	1024.1	1028.1	1028.1
7.5°	1021.5	1021.5	1018.8	1024.1	1024.1
10°	1013.5	1013.5	1012.2	1018.8	1018.8
12.5°	1001.5	1002.8	1001.5	1009.5	1009.5
15°	988.2	989.5	990.9	1000.2	1000.2
17.5°	970.9	973.6	976.2	986.9	988.2
20°	955.0	956.3	961.6	973.6	974.9
22.5°	933.7	937.7	944.3	956.3	960.3
25°	909.7	915.1	923.0	939.0	941.7
27.5°	887.1	891.1	901.8	919.1	924.4
30°	859.2	865.9	879.2	896.4	903.1
32.5°	832.6	839.3	855.2	873.8	879.2
35°	799.4	808.7	827.3	848.6	855.2
37.5°	767.4	776.7	799.4	823.3	831.3
40°	734.2	744.8	768.8	796.7	807.3
42.5°	698.3	712.9	739.5	770.1	782.1
45°	662.4	675.7	708.9	743.5	756.8
47.5°	623.8	639.7	675.7	716.9	732.9
50°	582.6	602.5	643.7	689.0	706.3
52.5°	541.3	563.9	610.5	661.0	679.6
55°	501.4	522.7	578.6	633.1	653.0
57.5°	457.5	484.1	545.3	603.8	623.8
60°	412.3	441.6	512.1	573.2	594.5
62.5°	367.1	400.3	480.1	541.3	563.9
65°	321.9	359.1	442.9	508.1	530.7
67.5°	278.0	319.2	408.3	473.5	496.1
70°	227.4	279.3	371.1	434.9	457.5
72.5°	180.9	240.7	335.2	395.0	415.0
75°	139.7	203.5	295.3	349.8	357.8
77.5°	102.4	166.3	254.0	272.7	274.0
80°	69.2	133.0	194.2	191.5	194.2
82.5°	45.2	99.8	122.4	137.0	138.3
85°	26.6	58.5	71.8	79.8	81.1
87.5°	13.3	20.0	25.3	26.6	29.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)