

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: P309660

Luminaire Tested: **24FCZ2-60HE-UNV-L82765-HRP-CP125-W2A-U-5700K**

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: P309660
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: 24FCZ2-60HE-UNV-L82765-HRP-CP125-W2A-U-5700K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.125"
POLYCARB SHEET
Light Source: (336) 5700K 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: 4262.0 lumens
Efficiency: N/A
Efficacy: 87.2 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

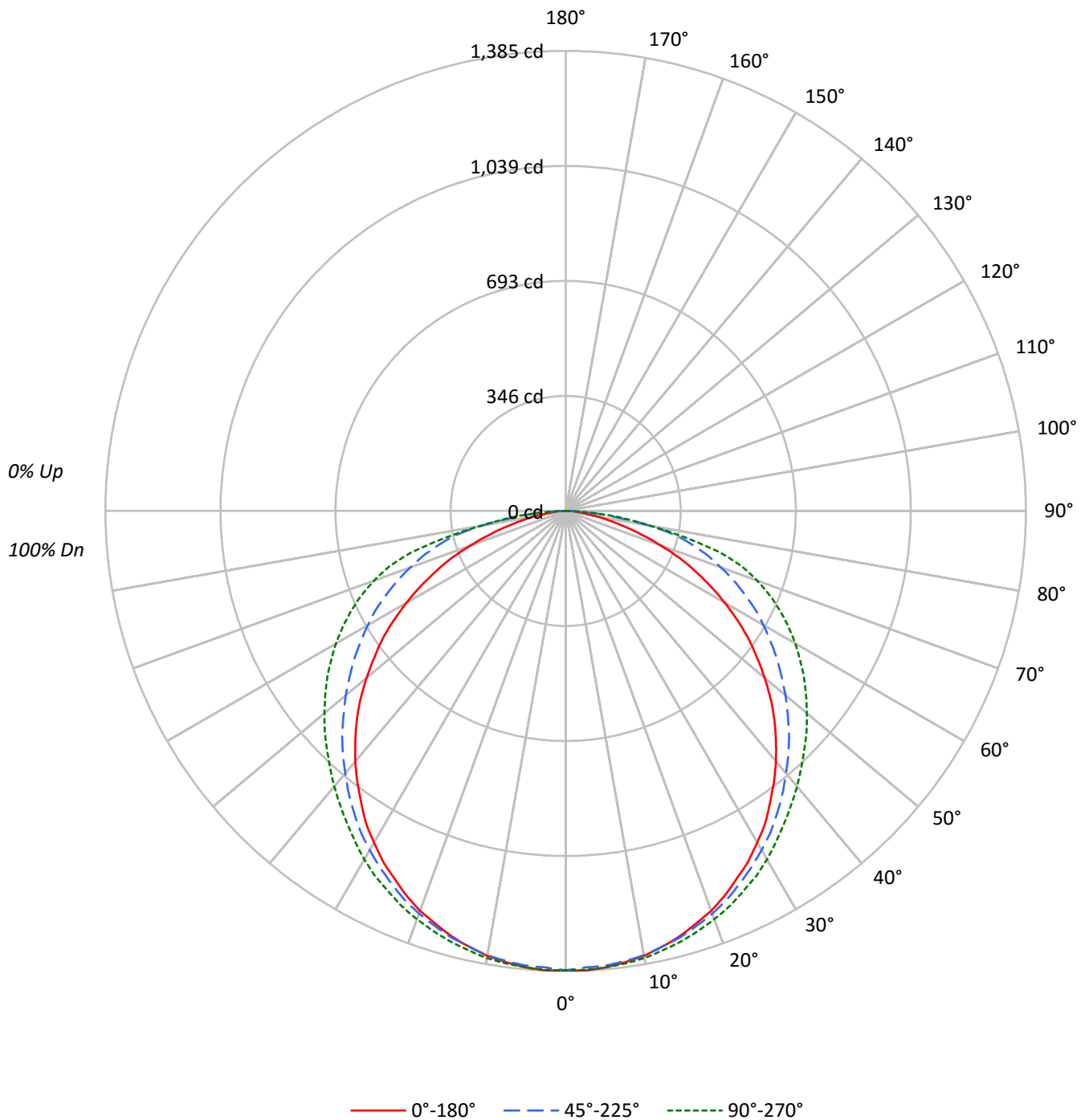
Input Watts (W): 48.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				0
RW	70	50	30	10	70	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		100
1	108	103	98	94	105	101	96	93	96	93	90		92	90	87		82
2	98	89	82	76	95	87	80	75	83	78	73		80	75	71		67
3	89	78	69	62	86	76	68	62	73	66	61		70	64	59		56
4	81	68	59	52	79	67	59	52	65	57	51		62	56	50		48
5	74	61	52	45	72	60	51	45	58	50	44		56	49	44		41
6	69	55	46	39	67	54	45	39	52	44	38		50	43	38		36
7	63	50	41	34	62	49	40	34	47	39	34		46	39	34		31
8	59	45	36	30	57	44	36	30	43	36	30		42	35	30		28
9	55	41	33	27	54	41	33	27	40	32	27		39	32	27		25
10	52	38	30	25	50	38	30	25	37	30	25		36	29	24		23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1861	1861	1861
5°	1863	1856	1863
10°	1858	1855	1867
15°	1847	1852	1869
20°	1834	1847	1873
25°	1812	1838	1875
30°	1791	1832	1882
35°	1761	1823	1884
40°	1730	1811	1902
45°	1691	1810	1932
50°	1636	1808	1983
55°	1578	1821	2055
60°	1488	1848	2146
65°	1375	1892	2266
70°	1200	1958	2415
75°	974	2059	2495
80°	719	2018	2018
85°	551	1488	1680



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	131.0	3.1
10°-20°	376.2	8.8
20°-30°	572.7	13.4
30°-40°	695.4	16.3
40°-50°	734.6	17.2
50°-60°	693.2	16.3
60°-70°	576.4	13.5
70°-80°	379.2	8.9
80°-90°	103.4	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°	1079.8	25.3
0°-40°	1775.2	41.7
0°-60°	3203.1	75.2
0°-90°	4262.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4262.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1383	1383	1383	1383	1383	
5°	1379	1379	1374	1379	1379	131
15°	1326	1328	1329	1342	1342	374
25°	1220	1228	1238	1260	1263	563
35°	1072	1085	1110	1138	1147	671
45°	889	906	951	997	1015	684
55°	673	701	776	849	876	599
65°	432	482	594	682	712	427
75°	187	273	396	469	480	202
85°	36	78	96	107	109	44
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1382.8	1382.8	1382.8	1382.8	1382.8
2.5°	1384.6	1382.8	1375.7	1382.8	1382.8
5°	1379.2	1379.2	1373.9	1379.2	1379.2
7.5°	1370.3	1370.3	1366.8	1373.9	1373.9
10°	1359.6	1359.6	1357.8	1366.8	1366.8
12.5°	1343.6	1345.3	1343.6	1354.3	1354.3
15°	1325.7	1327.5	1329.3	1341.8	1341.8
17.5°	1302.5	1306.1	1309.7	1323.9	1325.7
20°	1281.1	1282.9	1290.0	1306.1	1307.9
22.5°	1252.6	1257.9	1266.8	1282.9	1288.2
25°	1220.4	1227.6	1238.3	1259.7	1263.3
27.5°	1190.1	1195.5	1209.7	1232.9	1240.1
30°	1152.6	1161.6	1179.4	1202.6	1211.5
32.5°	1117.0	1125.9	1147.3	1172.3	1179.4
35°	1072.3	1084.8	1109.8	1138.4	1147.3
37.5°	1029.5	1042.0	1072.3	1104.5	1115.2
40°	984.9	999.2	1031.3	1068.8	1083.1
42.5°	936.7	956.4	992.1	1033.1	1049.2
45°	888.6	906.4	951.0	997.4	1015.2
47.5°	836.8	858.2	906.4	961.7	983.1
50°	781.5	808.3	863.6	924.3	947.4
52.5°	726.2	756.5	819.0	886.8	911.8
55°	672.7	701.2	776.2	849.3	876.1
57.5°	613.8	649.5	731.6	810.1	836.8
60°	553.1	592.4	686.9	769.0	797.6
62.5°	492.5	537.1	644.1	726.2	756.5
65°	431.8	481.8	594.2	681.6	711.9
67.5°	372.9	428.2	547.8	635.2	665.5
70°	305.1	374.7	497.8	583.5	613.8
72.5°	242.7	323.0	449.6	529.9	556.7
75°	187.3	273.0	396.1	469.3	480.0
77.5°	137.4	223.0	340.8	365.8	367.6
80°	92.8	178.4	260.5	256.9	260.5
82.5°	60.7	133.8	164.2	183.8	185.6
85°	35.7	78.5	96.4	107.1	108.8
87.5°	17.8	26.8	33.9	35.7	39.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)